

**CHARLES UNIVERSITY IN PRAGUE
FACULTY OF SOCIAL SCIENCES
INTERNATIONAL ECONOMIC AND POLITICAL
STUDIES**

MASTER'S THESIS

**EXPANSION STRATEGY OF RUSSIA'S GAZPROM
INTO EUROPEAN MARKET AND EUROPEAN
COUNTERACTION POLICY**

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Subject:	IEPS
Academic Year:	2011/2012
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Date Submitted:	9th January 2012

THESIS PROJECT

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The proposed title: Expansion strategy of Russia's Gazprom into European market and European counteraction policy

Research question:

The worrying level of dependence on natural gas imports from sources outside the European Union (EU) is becoming more obvious, against the background of own reserves depletion. According to the EIA (US Energy Information Administration) and IEA (International Energy Agency), between now and 2020, the EU will need to develop additional natural gas supplies of approximately 120-150 Gcm/a¹. As of 2009 Europe has obtained approximately 47% of its natural gas supplies from distant sources. This figure is projected to grow to more than 70% by 2020.²

Gazprom, presently controlling more than 85% of Russian natural gas production and has a monopoly on the natural gas export, is the largest exporter of natural gas to Europe³. Dependence on Russian gas is distributed disproportionally among European countries. The most dependant countries are Bulgaria, Finland, Slovakia, Romania, Lithuania, Estonia, and Latvia. The latter three imported 100% of their natural gas from Russia in previous years, while the

¹ The Oil Drum, "Europe Faces Tough Choices Over Natural gas," Oilprice.com, Sept 07, 2010, <http://oilprice.com/Energy/Natural-Gas/Europe-Faces-Tough-Choices-Over-Natural-gas.html>

² "Europe Faces Tough Choices Over Natural gas"

³ "Europe Faces Tough Choices Over Natural gas"

average dependence can be estimated as 40% of all EU imports in 2009 (*Eurostat Database, OECD, Natural Gas Information 2009*).⁴

The strong desire of most of EU member states to diversify their gas imports is understandable, taking into account that disruption of gas supply from Russia can cause huge damage to the European economy, especially Eastern and South Eastern Europe.⁵ Since 2005, Poland, as the potential internal gas supplier, has been taking steps towards energy independence by granting 30 companies the license to search for gas on its own territory. Companies like Exxon Mobil, Conoco Phillips and Marathon have been studying the Polish terrain to assess how expensive it would be to access the country's shale plays. Geologists estimate that there are approximately 1.4 billion cubic meters of untapped natural gas throughout the country. In addition, this month Poland called on the European Union to give more weight to the role of shale gas in its energy policy in order to cut the region's dependence on imports.⁶

However, Russia has gas reserves of 48 trillion cubic meters (TCM), according to the Russian A+B+C1 classification.⁷ Gazprom estimates that it has 28 TCM of reserves in fields, in production or being prepared for development, compared to an international estimate of 18.5 TCM of proven and probable reserves in those same fields.⁸ Whichever estimate is used, it is clear that Russian reserves overwhelm all other gas reserves available to Europe with the

⁴ Protasov Vitaly, "EU-Russia Gas Relations: a View From Both Sides," International Association for Energy Economics, (Chicago, USA, 2009), p.27

⁵ Protasov Vitaly 27

⁶ Natural Gas for Europe, "Gazprom Admits Shale Gas Is A Thorn In Their Side," Sept 20, 2010, <http://naturalgasforeurope.com/gazprom-admits-shale-gas-is-a-thorn-in-their-side.htm>

⁷ Stern, Jonathan

⁸ Stern, Jonathan

exception of Middle Eastern countries, which are anticipated to deliver to Europe only in the form of LNG over the next two decades.⁹

Russia's expansion strategy is focused on increasing of European dependence on Russian natural gas. The Kremlin has advanced this strategy through a series of policies. It creates dependency by locking in demand with energy importers, consolidating the supply of gas by signing long-term contracts with Central Asian energy producers, and securing control of strategic energy infrastructure in Europe and Eurasia or developing new one. The most vivid example here is Nord Stream and South Stream pipelines, which some of political experts call as tool for Russia to strengthen its influence the political process in EU countries in Eastern Europe. Particularly since the perceived threat of interrupting gas deliveries already provides Russia with political leverage in the countries concerned, even before Gazprom would actually stop the gas flows.¹⁰

It is clear here that Gazprom stays ahead of the expansion processes into EU natural gas market with 50.002 per cent of controlling stake in hands of the government. Therefore, activity of Gazprom acquires not just main principle of any economic unit as profitability, but also dependence on political ambitions of the state. For this reason, Gazprom's expansion aspirations are running into increasing opposition led by fears of over-reliance on Russian gas and growing Russian influence not just on distribution networks in Europe, but also on EU political decision making process in general.

⁹ Stern, Jonathan, "*Natural Gas in Europe - The Importance of Russia*," centrex.at, Sept 24, 2010, http://www.centrex.at/en/files/study_stern_e.pdf

¹⁰ Leonhardt van Efferink, "*Nord Stream, South Stream and Nabucco Pipelines*," Exploring Geopolitics, (October 2010), Sept 27 2010, http://www.exploringgeopolitics.org/Publication/Efferink_van_Leonhardt_Russian_Gas_NordSouthstream_Nabucco_Pipelines_ENI_EDF_EON_Ruhrgas_Wintershall_Gasunie_Azerbaijan_UzbekiTurkmeniKazakhstan.html

The supposed structure of the thesis:

- Abstract
- Contents
- List of abbreviations
- List of tables/figures
- Introduction
- Literature (source) review
- Research methods
- Theoretical Considerations [the neorealist approach: issues of the defensive realism and the energy security]
- Analysis of Natural Gas Market of Russia and Gazprom as the Russian quasi-gas-monopoly
- Analysis of CIS countries Natural Gas Market [consideration Gazprom's energy policy here as the part of expansion strategy into European markets]
- Analysis of Natural Gas Market of Europe [Share of Gazprom, Gazprom's expansion strategy, current situation and perspectives]
- Competing pipelines [consideration of "South Stream" and "Nabucco" as the main competing projects of Russia and Europe]
- Conclusion
- Summary abstract
- Bibliography

The intended methodology of the thesis:

The following methods are going to be implemented:

- 1) *Case study method* (accompanied with the event analysis) which will help with providing a wide range of information and theoretical explanation concerning plans/aims of the pipelines construction;
- 2) *Data analyzing method* which is useful for evaluation of descriptive statistical data (about the natural gas reserves, its production, consumption etc) and for presenting additional points to the arguments of the thesis;
- 3) *Method of comparative analysis*, which on the basis of the results received after the previous methods applied, will help to produce a better perspective for the studied issues.

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http://www.exploringgeopolitics.org/Publication_Efferink_van_Leonhardt_Russian_Gas_NordSouthstream_Nabucco_Pipelines_ENI_EDF_EON_Ruhrgas_Wintershall_Gasunie_Azerbaijan_UzbekiTurkmeniKazakhstan.html
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DECLARATION

I hereby declare that this thesis is my own work, based on the sources and literature listed in the appended bibliography. The thesis as submitted is 134410 keystrokes long (including spaces), i.e. 75 manuscript pages.

Your name: Andrey Khayrullaev

9th January 2012

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LIST OF ABBREVIATIONS

Bcm	Billion cubic meters
BTE	Baku-T'bilisi-Erzurum pipeline
CAC	Central Asia Center
CAGP	Central Asia Gas Pipeline
CEEGAG	Centrex Europe Energy and Gas AG
CEGH	Central European Gas Hub
CIS	Commonwealth of Independent States
EU	European Union
GDP	Gross Domestic Product
IFRS	International Financial Reporting Standards
ITGI	Interconnector-Turkey-Greece-Italy
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
NATO	North Atlantic Treaty Organization
OPEC	Organization of the Petroleum Exporting Countries
RUB	Russian rouble
SCP	South Caucasus Pipeline
TAP	Trans-Adriatic Pipeline
TCGP	Trans-Caspian Gas Pipeline
Tcm	Trillion cubic meters
TCP	Trans-Caspian Pipeline

UGSS	Unified Gas Supply System
USD	United States dollar
USSR	Union of Soviet Socialist Republics

INTRODUCTION

The worrying level of dependence on natural gas imports from sources outside the European Union (EU) is becoming more obvious, against the background of own reserves depletion. According to the EIA (US Energy Information Administration) and IEA (International Energy Agency), between now and 2020, the EU will need to develop additional natural gas supplies of approximately 120-150 Gcm/a. As of 2009 Europe has obtained approximately 47% of its natural gas supplies from distant sources. This figure is projected to grow to more than 70% by 2020.¹¹

Europe's natural gas market shows heavy dependence on exporters outside the European Union (EU). Statistics show that Europe obtained forty-seven percent of its natural gas supplies from external sources in 2009.¹² Taking into account that natural gas is not transportable, as it is required to be attached to the pipeline, it is a hardly replaceable source of energy. Thereby, the high dependency on one exporter can easily provoke dramatic economic downturn in case of any conflict, leading to the gas supply cut from the exporter's side.

But why Russia and especially Russian Gazprom are considered as undesirable parity at the position of Europe's biggest gas supplier? At present, the leading source of natural gas imports to Europe is Gazprom - State-Controlled Natural Gas Monopoly. Gazprom produces 85 percent of natural gas in Russia and has monopoly share in natural gas export to Europe. It also should be mentioned that for Russia, energy, as the major export earner, is the most powerful

¹¹ The Oil Drum, "Europe Faces Tough Choices Over Natural gas", Oilprice.com, Sept 07, 2010, 10 Oct. 2011, <http://oilprice.com/Energy/Natural-Gas/Europe-Faces-Tough-Choices-Over-Natural-gas.html>

¹² Keenan Rita. "Statistical aspects of the energy economy in 2009" Eurostat: Statistics in focus (2010):1-12. 4 November 2011, http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-10-043/EN/KS-SF-10-043-EN.PDF

non-military tool of economic and political pressure on International arena, good example here is the conflict with Ukraine and Belarus, which will be also brought up in this work.

The goal of the master thesis is to answer the main questions: 1) Are European “fears” justified? 2) What are the perspectives for Europe to decrease its dependency on Russian natural gas export? In order to do that the following should be disclosed:

- *Defensive Realism Theory and Russian Energy Policy.* The goal of this chapter is to provide with enough arguments to prove that Russia’s Energy Policy relies more on defensive realism theory than on any other International Relation Theories. That helps us to support the idea, that Russia, in a logical desire of security, is interested in expansion of its influence in energy sector, while Europe wants to protect itself against increasing dependence on Russia. Based on what we can conclude, that Russia as a state is motivated by gaining as much power as possible to be politically and economically secure.

- *Analysis of Natural Gas Market of Russia and Gazprom as the Russian quasi-gas-monopoly.* The goal of this chapter is to consider the capacity of Russian natural gas industry for aggressive international expansion and evaluate the role of the government in Gazprom’s decision making process. It is important to define how strong the connection between government and the company is; what affects Gazprom’s expansion strategy plans more: revenue generating desire as any of economic unit, or political aspirations of its host state.

- *Analysis of CIS countries Natural Gas Market [consideration Gazprom’s energy policy here as the part of expansion strategy into European markets].* The CIS natural gas market involves many states in the region. However, their consideration will be limited based on potential to influence the European gas interests. Azerbaijan, Turkmenistan and Kazakhstan are

the parts of the European agenda towards Energy security. The reason is not only their substantial gas reserves, but also their geographical location, which provides an optimal way to link all parties to deliver the gas to European customers. The goal of this chapter is to evaluate current condition of the local markets of these countries, perspectives to cover Europe's gas demand by them and Gazprom's actions directed to prevent Europe's presence on this market.

- *Analysis of Natural Gas Market of Europe.* The current condition of the European natural gas market should be disclosed in order to understand its dependence on this source of energy and dependence on Russia itself. However, the chapter is mainly dedicated to Gazprom's expansion plans towards European market and Europe's counteraction to them.

- *Competing Pipelines [Consideration of "South Stream" and "Nabucco" as the Main Competing Projects of Russia and Europe].* The South Stream and the Nabucco projects are the two largest competitors for the European Union natural gas supply industry. The case fully demonstrates competition of Russia and Europe, where Russia tries to increase its share on European market by creation additional supply infrastructure, while Europe looks for alternative sources of supply.

LITERATURE REVIEW

In order to disclose the main thesis questions a number of sources have been chosen, which are classified by primary and secondary sources. A primary source is a document or physical object which was written or created during the time under study. These sources were present during an experience or time period and offer an inside view of a particular event, while secondary source interprets and analyzes primary sources.¹³

Firstly, to support the theoretical part of the thesis, assuming that Russian Foreign Policy (and as the result Russian Energy Policy towards external markets) is based on Defensive Realism Theory, the works of researches and authors of (neo) realism theory and political scientists specializing on Russia (such as John Berryman, Erik Jones, Colin Elman, Anita Orban, Robert Gilpin, Richard Sakwa, Kanet, R.E. and Homarac, L, Legro, J.W. and Moravcsik, A) are used. These works will help us to define the main assumptions of the theory and to find connections between them and Russian Foreign Policy - that provides us with enough arguments to support the idea that Russia, in a logical desire of security, is interested in expansion of its influence in energy sector as the primary one for Russia. Thereby, by reviewing connections between Russian government and Gazprom we can identify the level of politization of the company and its involvement in Russian Foreign Policy. For these goals we will analyze the opinions of Simon Pirani (the book: "Russian and CIS gas markets and their impact on Europe"), Richard Sakwa (the book: "Putin and the Oligarchs"), Ross Cameron (the book: "Russian

¹³ "Getting started with your research", *Princeton.edu*, December 10 2011, <http://www.princeton.edu/~refdesk/primary2.html>

Politics under Putin”) together with other analytical resources as New Political Economy and Eurasia Daily Monitor Journals, Guardian and RFE/RL news portals and others.

Secondly, taking into account that the primary object of our research is Gazprom as the Russian state monopoly with the sole right on gas export, it is necessary to consider its positions on local and foreign markets and capacity for overseas expansion. In order to do that, statistical data will be used, which helps us to disclose the situation on the natural gas markets of the European Union, Russia, Azerbaijan, Turkmenistan and Kazakhstan by the end of 2009. Additionally, the level of Europe’s dependency on natural gas in general and on Russian gas in particular will be disclosed. The sources, from which such information will be extracted are British Petroleum official website, Eurostat, European Commission’s Directorate, Gazprom official website and many others, where British Petroleum official site is taken as the main one, since it is widely recognized as the most authoritative and reliable. The second reason, why British Petroleum was taken as the main one, is the necessity of data comparability. The fact that Gazprom uses different standard for the gas reserves evaluation, which takes into account only actual presence of natural gas in deposits, while international standards evaluate also the economic effectiveness from the reserves’ depletion. It makes it difficult to compare the data received from the different sources.

Thirdly, as the main part of the thesis dedicated to Gazprom’s expansion plans towards European market and Europe’s counteraction to them, it will be built based on several authors’ researches and opinions as Steven Woehrel, Aleksandr Medvedev, Steven Brakman, Charles van Marrewijk, and Arjen van Witteloostuijin, Danila Bochkarev, Roman Kupchinsky, White, Aoife, and Anna Shiryaevskaya and others.

RESEARCH METHODOLOGY

In the conduction of this study the following research methods have been used: data analyzing, comparative analysis and the case study.

The *data analyzing method* – the effective way of evaluation the natural gas markets condition of the represented counties as EU Member States, Russian Federation, Azerbaijan, Turkmenistan, and Kazakhstan. Mainly, the following data is analyzed: the volume of proved natural gas reserves, the level of production and consumption, the volumes and destinations of exported and imported gas, consideration of gas transportation capacity and level of competition on local markets. To provide reader with clearer picture on considering subjects a number of graphs and charts will be used.

The *method of comparative analysis* – directed more on demonstration advantages and disadvantages of the considered countries in comparison with each other – mainly applicable for the Russian Federation and EU-27. The method will also help to evaluate the countries' natural gas producing level, importing and exporting potential and natural gas dependency rate. Using the method we can define the reason of growing dependence rate of Europe and role of Russia in EU's energy sector, Russian expansion policy towards European market and Europe's counteraction measures.

In order to fully understand the process of “clash” of Russian and European interests the *case study method* will be used. The subject of consideration is two projects South Stream and Nabucco pipelines, the first one is the core project of Russia's expansion strategy towards

European market, while second one is Europe's attempt to find alternative to Russian gas. Defining the current situation, perspectives and expectations related to projects we can make conclusion on which country is more successful in its aspirations.

CHAPTER 1. DEFENSIVE REALISM THEORY AND RUSSIAN ENERGY POLICY

In modern form of international relationship, it is very difficult to understand the foreign policy of Russian Federation. Regardless of the challenges like integration and globalization, Russia is still deeply in the illusion of hegemony that was experienced during the cold war.¹⁴ Despite the fact that Russia is the world's biggest country with a capability to develop nuclear weapons, it still encounters some problems that are associated to political and economic transformation. In spite of that Russia has a great influence in international relations as it is viewed as one of the world's major economic power. Such influence is more related to Russian's domination in the global energy sector, while other its industries are relatively weak. Moreover, it can be called the main tool of Russia's economic and political pressure.

The goal of this chapter is to provide with enough arguments to prove that Russia's Energy Policy relies more on defensive realism theory than on any other International Relation Theories. That helps us to support the argument that Russia in a logical desire of security is interested in expansion its influence in energy sector, while Europe wants to protect itself against increasing dependence on Russia.

For the purpose of analyzing the Russian Energy Policy on the basis of defensive realism theory, it would be appropriate to consider the challenges that the country has faced as well as strategies it is employing to gain control of the energy sector.

¹⁴ Berryman J., "Russia and China in the New Central Asia: The Security Agenda", in: Kanet, R.E. (ed.), *Russia Re-Emerging Great Power*, (Houndmills, Basingstoke, Hampshire and New York: Palgrave Macmillan, 2007), p.165

1.1. Defensive Realism Theory and Russia.

There is a very simple and realistic justification behind why states contest to gain more power. The justification is based on four simple assumptions related to international system. Looking at these assumptions individually, none of them suggest that states attempt to gain more power at other states' expense.¹⁵ But indeed, when they are combined together, they illustrate a world of endless security rivalry that has prompted Russia to adopt defensive realism theory. The first assumption states that the individual or the actors, which have great powers, directs politics of the world and the system they work in is an anarchic system. This does not mean that there would be a disorder or chaos as anarchy is a kind of ordering principle.

Anarchy is a system in which there would be no ultimate arbiter or any centralized authority that would be above the state. In addition, anarchy which is at times associated with hierarchy is also a kind of ordering principle that is related to domestic politics.¹⁶ Russia seems to be trying all that it can to gain control of its territories and extend this control to other nations in Europe without using excessive force to achieve this.

Russian as a major supplier of gas and oil in the European market is considered to be quite influential in the energy sector.¹⁷ The Russian government strives to control the energy industry in Russia and the neighboring countries in the larger Europe. This has led to emergence of an authoritarian Russian political system, where the former officers who worked with the intelligence are said to play major roles.

¹⁵ Jones, E., "Look for the Blind Spot where Structural Realism Meets Pluralistic Stagnation". The British Journal of Politics and International Relations, Vol. 11, 225-226, 2009

¹⁶ Elman, C., "Realism", in: M. Griffiths (ed.), International Relations Theory for the Twenty-First Century. An Introduction, (Milton Park, Abingdon, Oxon: Routledge, 2007), p.12

¹⁷ Jones, E. 30

It is well noted that Russian firms have of late done all that they can to purchase a big portion of pipelines, storage facilities, ports, together with other major energy assets associated with eastern and central Europe. The main reason for this move is so to be recognized as the major transport energy supplier in the western European markets, besides securing a greater control of the domestic markets within its region.¹⁸ Records show that in those cases where these energy assets were handed over to non-Russian firms, Russia went ahead to cut off energy supply to these facilities. Russia has also in several instances tried to build new pipelines that would avoid infrastructures not under its control. Russia has also tried to eliminate any energy subsidies that a former Soviet republics could have been controlling after the fall of the Soviet Union, mainly by raising the price of natural gas that these countries have to pay in comparison to the prices in the market.

The second assumption is related to the military capabilities of Russia. As each state has its own potential, they can also negatively influence it neighbor. The capability may vary state to state and it many also change as time passes.¹⁹ Russia may have been losing grounds for the last few decades but it is employing all possible strategies to regain this control. Another reason (third assumption) is related to the uncertainty regarding the intentions of different states. Gaining knowledge related to different states that whether they are willing to use force to change balance of power, or they are pleased with the power they have and are not willing to use any force to change the balance Russia has held the argument that it can never be too sure of the states' intention that they are aware of whether they are status quo state or revisionist one.

¹⁸ Orban, Anita, "*Power, energy, and the new Russian imperialism*", (Westport, Conn. : Praeger Security International, 2008), p. 32

¹⁹ Berryman J., "*Russia and China in the New Central Asia: The Security Agenda*", in: Kanet, R.E. (ed.), *Russia Re-Emerging Great Power*, (Houndmills, Basingstoke, Hampshire and New York: Palgrave Macmillan, 2007), p.167

The fourth assumption employed by Russia and which they use to justify their adoption of defensive realism theory, is that a state's ultimate objective is survival.²⁰ A state is always keen to maintain territorial integrity and autonomy irrespective of domestic politics.

Russia defense experts hold that there are times when states act very rationally while at times they are capable of making different strategies that increase their chances of survival. But on the other hand, it is also true that the strategies are sometimes miscalculated due to inadequate information.²¹ In this world it is very difficult to obtain correct information and due to such information serious mistakes happen. This is one of the strongest factors that have prompted Russia to justify its energy policy that is based on defensive realism theory as opposed to the offensive approach.

As mentioned above, none of the assumptions mention that states would compete among themselves for power. Indeed the third assumption mentions a revisionist state which acts aggressively for power although it is not elaborated why Russia is interested and prepared to fight for power. But when these assumptions are put together and combined, such condition arises where a state is not only preoccupied with balance of power but is also trying to acquire different incentives to increase its power even at the expense of other states. It is however true that great powers fear each other due to mistrust that arises among them. Studies have shown that the greatest fear among the states is that they have power, capability and even motives to attack one another.²² This has eventually led to anarchic system of operation where states are only concerned of their own security or external threats.

²⁰ Elman, C., "Realism", in: M. Griffiths (ed.), *International Relations Theory for the Twenty-First Century. An Introduction*, (Milton Park, Abingdon, Oxon: Routledge, 2007), p.12

²¹ Orban, Anita 33

²² Gilpin R., "The Theory of Hegemonic War", *Journal of Interdisciplinary History*, Spring, Vol. 18, No. 4, 1988, pp.591-593

The degree of fear varies from state to state and remains significant at all times although the cost of letting this happen is quite high. International politics is very delicate and it has potential to initiate a war which could result in mass killings or total destruction of a state.²³ Russia wants to be recognized as a powerful state and they want to be in an environment where they do not need much of help from their neighbors. The only way of survival for them is to employ defensive tactics and hence the need to clearly adopt defensive realism theory. This is because other states remain to be threats to Russia and they do not know which among them they can contact when they are in trouble. This does not exclude the possibility of alliance as they are indeed useful while handling dangerous adversity. Ultimately, it comes to a point where Russia as a state has to put its own interests first leaving before considering the international community.

In addition to fear of other states, also knowing that they live in a self-help world, Russia has realized that the only way to survive is to gain power. The reason behind gaining power is very simple as when a state is more powerful as compared to its competitors, there is also a less chance of attack. For example, no one in Western Hemisphere could try to attack USA because it is relatively more powerful than its neighbors.²⁴ Russia wants to gain the same in Europe. This is the justification that drives Russia to find means that could shift the power in such a way that it is fruitful for them. This all results in a system that forces every state to act and think in a way that is more like revisionist state even if they could be classified as status quo.

²³ Bigg, C., "Russia Warns Czech Republic, Poland on Missile Defense", *RFE/RL News* (by country: Russia) February 20, 2007

²⁴ Elman, C. 13

1.2. Russia's Energy Policy in Relation to the Concept of Defensive Realism Theory.

In an effort to dominate the energy sector and remain powerful in the control of this sector, the Russia's energy policy is based on the principles of the defensive realism. To emphasize this, Russia does not advocate for the use of force while handling the international relations. Internal political preferences in many states around the world, and the distribution of power along the global system are based on defensive realism theory.²⁵ The application of the defensive realism in Russia is based upon the realization of the need to remain economically independence.

The country has vowed to use all the available resources in an effort to protect her national interests. In order to achieve this objective the state has to continue in increasing the potential it has in the fuel and energy industry as means of boosting the economy.²⁶ Moreover, Russia is concentrating in being rampant in the world market in relation to the supply of energy. The authorities in Russia understand that when there is uneven distribution of natural resources among countries, possession of energy resources will remain paramount in the international scene.

Russia as the world's largest exporter and producer of energy uses the economic returns from the energy resources for the protection of the national security.²⁷ The idea of possessing the energy resources is viewed as a lever for the promotion of foreign and energy policy. To reaffirm the importance of the Russia's energy sector, Sergei Lavrov - Russia's Minister of Foreign

²⁵ Fantini M., "*The Economic Relationship between Russia and the EU: History and Prospects*", in: Gower, J, and Timmins, G. (eds.), *Russia and Europe in the Twenty-First Century: An Uneasy Partnership* (London and New York: Anthem Press, 2007), p.255

²⁶ Bigg, C., "Russia Warns Czech Republic, Poland on Missile Defense", *RFE/RL News* (by country: Russia) February 20, 2007

²⁷ Sakwa R., "*Vladimir Putin and Russian Foreign Policy towards the West: Towards a New Realism*", (An Uneasy Partnership, London and New York: Anthem Press, 2007), p.57

Affairs, stated that energy was a strategic industry in Russia.²⁸ Its supply to the rest of the world is a means of achieving independence in the foreign policy. This is however not taken lightly by many countries that continue criticizing Russia for the role it plays in the energy sector as they are generally unhappy with her dominance in this industry. The general application of the defensive realism was evident during the period of cold war. The international relations played a very helpful role in explaining and analyzing different nations and the leaders of the countries.²⁹ The structural attitudes were the main things that lead to high potential for assessing the order of bipolar approach in politics where offensive and defensive realism approaches were made to be part of the debate.

Both realisms stated different ideas and views regarding the foreign policies and military of state. However, both of them relates to order of bipolar. The defensive realism supports the survival of state and it considers it as its main objective. Moreover, the present states that are the strongest should adopt a moderate policy, for the reason that the powers have not been achieved yet.³⁰ On the other hand, offensive realism assumes that there are wide incentives and advantages through the international anarchy.³¹ However, this defensive realism theory has been widely influenced by the ineffectiveness of bipolar order and the decline of USSR.

An example on the application of defensive realism in the Russia's energy policy is the Russia-Ukraine gas dispute in January 2006. Russia had temporarily cut the gas supply to Ukraine. Most of the European states were opposed the Russia's move but Moscow could not understand why Europe was siding with Ukraine which according to Moscow, was involved in

²⁸ Kanet, R.E. and Homarac, L, "*The US Challenge to Russian Influence in Central Asia and the Caucasus*", in: Kanet, R.E. (ed.), *Russia Re-Emerging Great Power*, (Houndmills, Basingstoke, Hampshire and New York: Palgrave Macmillan, 2007), pp.182-185

²⁹ Gilpin R., "The Theory of Hegemonic War", *Journal of Interdisciplinary History*, Spring, Vol. 18, No. 4, 1988, 591-593

³⁰ Orban, Anita 35

³¹ Legro, J.W. and Moravcsik, A. "Is Anybody Still a Realist?", *International Security*, Fall Vol. 24, No. 2, 1999, p.30

the theft of Russian gas. Russia had closed the gas pipes leading to Ukraine although most of the European countries complained that Russia should not have taken such drastic move without thoroughly consulting the European consumers. The Russia's behavior of trying to regulate the gas supply to the neighboring states was by then considered to be quite authoritative and anti-democratic.³² The shutdown for the gas deliveries had lasted for just 24 hours but had tremendous psychological consequences to the consumers. In 2007 Russia had an oil and gas dispute with Belarus concerning the prices of these commodities which actually resulted in a three day stoppage on delivery of oil and gas to Belarus.

About 15 percent of all the oil consumed in the EU is from Russia while 30 per cent of all the EU oil imports are from Russia making Russia to be in a strategic powerful position in the energy sector. As Russia continues to apply defensive realism in energy policy, it had entered into a talk with the Iranian President in 2007 on the possibility of forming a gas cartel. Many European countries feared that such a cartel would lead to artificial shortages of gas supply in a bid to increase the market prices. There was a delegation from Russia that was sent to Algeria, which is the second largest supplier of gas to Europe, in 2007 to analyze the possibility of having a gas cartel. The view for the western countries was that Russia was becoming increasingly aggressive in using energy as a weapon against Europe by the attempt to create a gas OPEC.

The main serious problem that was anticipated was fast but peaceful changes in the global order. Practically this contradicted with the predictions of Kenneth Waltz.³³ The possibilities were regarding the disagreement of cataclysmic through which cold war would end. According to Erik Jones, the problems of structural realism that were faced were anticipated and he further pointed out that this realism could not consider internal determinants that broke up

³² Orban, Anita 38

³³ Fantini M. 255

Soviet Unions. It was further stated by Wolfforth that the decline of USSR was not entirely due to a decline in Soviet power but the decline of perception by Soviet elites was also one of the reason.

The ability to explain and respond to the structural realism seemed to be very problematic especially due to the imposed policy by Russia and refusal of Moscow to accept a new place in the system. One could easily notice that there had been a clear objection from Moscow in accepting a new place.³⁴ By observing their foreign activities one could figure out the role that it has planned to play internationally, especially the global aspirations of Russia and the lost position due to falling of USSR. Russia further acted in opposition to the policy of US after the ineffectiveness of bipolar order. Russia also criticized unipolar order that was introduced by Washington and rather a new system of multipolar was demanded that could reflect “legitimate” position of the federation of Russia. Similarly, the fierce opposition of Moscow towards the operation of NATO in the US and Kosovo had been a good example. It was perceived that the Russian objectives were fully ignored and Moscow was not allowed to take part in the affairs of the world.³⁵

Conclusion

The need to apply defensive realism in the Russia’s energy policy has been catalyzed by the emerging international competition for the Russia’s energy resources. If offensive realism is applied friction is likely to arise between Russia and the consumers. The international competition that takes place in Russia is of great significance especially in positioning Russia as

³⁴ Orban, Anita 47

³⁵ Berryman J. 165-167

a world power without using military force. The main focus of defensive realism theory employed by Russia is on the internal determinants such as political regimes, ideology or political leaders and this does not possibly reflect the foreign policy of Russian, along with the entire structure of international system. Russian policies have remained very complex in nature. Russia however enjoys the first position as the largest country but its economic capabilities have become very limited and there had been a decline in international position after the cold war ended. The policies of Moscow still include a tradition of central government as well as the dominant relationships with the neighboring countries. All of this demonstrates the centralization process in the political life of Russia but it has of late clearly adopted the approach supported by defensive realism theory to regain control as a superpower in Europe.

CHAPTER 2. ANALYSIS OF NATURAL GAS MARKET OF RUSSIA AND GAZPROM AS THE RUSSIAN QUASI-GAS-MONOPOLY

2.1. Natural Gas Market of Russia

With nearly one fifth of worldwide production capacity, Russia is the world's most important source of natural gas. At the current rate of production, its resources, the largest worldwide, will last for another 70 years.³⁶ The cited internationally total proven Russian gas reserves as of the end of 2009 was 44.38 trillion cubic meters (Tcm).³⁷

In 2009 Russia was the world's second-largest natural gas producer, ceding top place to the United States. The total Russian natural gas production in year 2009, excluding gas flared or recycled, was estimated at the level of 527.5 billion cubic meters (Bcm), 73.9% (389.7 Bcm) of which was delivered to the local customers.³⁸ To follow the dynamics of Russian natural gas balance we can analyze the data of pre-crisis year 2007, with a 592.0 Bcm of total production, where already 71.3% (422.1 Bcm) was consumed locally. In comparison with pre-crisis year 2007, negative dynamics of internal consumption, as a total volume of production, are observed in 2009, with 8% and 12% downturn.³⁹

Russian gas production was sustained for more than 20 years by three supergiant fields in the Nadym-Pur-Taz (NPT) region of Western Siberia (Medvezhe, Urengoi and Yamburg). These

³⁶ Kunzemann Thilo, "Natural Gas: Russia's Riches," Allianz internet page, (Russia, March 06, 2008), November 01, 2010, <http://knowledge.allianz.com/energy/?294/energy-profile-natural-gas-russias-riches>

³⁷ "BP Statistical Review of World Energy. June 2010", *British Petroleum Global*, November 21, 2010, http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2008/STAGING/local_assets/2010_downloads/statistical_review_of_world_energy_full_report_2010.pdf

³⁸ "BP Statistical Review of World Energy. June 2010"

³⁹ "BP Statistical Review of World Energy. June 2010"

fields are all well into their decline phase, with production in the 2000s falling at 20-25 Bcm/year.⁴⁰

The new generation of supergiant fields is represented by Ob and Taz Bay fields, the Yamal Peninsula fields and the Shtokman field in the Barents Sea. The Ob/Taz Bay fields are estimated to have a production potential of up to 82 Bcm/year.⁴¹ The reserves of the Yamal Peninsula are more than 10 Tcm, with the potential to take the Russian gas industry through the next several decades of its development.⁴² Bovanenkovo, the first of these Yamal fields, will start production in 2011. Output will increase within three years to 115 Bcm/year, and eventually, when a further 25 Bcm/year is produced from the deeper horizons, to 140 Bcm/year.⁴³ After Bovanenkovo reaches its initial production plateau in 2014, the Kharasavei field will be brought into production. Shtokman, around 1000 km west of Yamal Peninsula, and 650 km offshore Murmansk in the Barents Sea, is a supergiant field with 3.7 Tcm of reserves.⁴⁴

Natural gas produced in Russia is pumped into gas trunk lines integrated within the Russian Unified Gas Supply System (UGSS). The UGSS is also the largest gas transmission system in the world and represents a unique technological complex comprising gas extraction, processing, transmission, storage and distribution facilities UGSS assures a continuous cycle of gas supply from the wellhead to the end user.⁴⁵ UGSS includes over 150,000 km of trunk gas pipelines (in single-line terms) and almost 6,000 km of bends. In addition, nearly 4,000 km of gas trunk lines

⁴⁰ "Annual Report 2006", *Gazprom*, p.32

⁴¹ "Gazprom in Questions and Answers", p.35

⁴² The Options for Yamal Peninsula field and pipeline development are set out in Stern, "The future of Russian Gas", pp 11-16

⁴³ Gazprom Press Release, "Gazprom management committee resolves to initiate investment stage of Bovanenkovo field development", October 6, 2006; Gazprom press conference on development of the raw material base and gas production, June 16, 2008

⁴⁴ "Loan Notes 2007", *Gazprom*, August 30, 2007

⁴⁵ "Gazprom in questions and answers", *Gazprom in Question and Answers*, November 28, 2010, <http://eng.gazpromquestions.ru/?id=6>

are outside the UGSS. The active underground gas storage capacity in Russia is over 60 Bcm. The throughput capacity of the gas transport system is about 700 Bcm/year.⁴⁶

The gas industry is vital for to the Russian economy, accounting for more than half of all the energy consumed in the country and contributing 13% of total export revenues.⁴⁷ While gas contribution is significantly less than of the oil industry, the later has no counterpart company, in terms of centrality and dominance, to Gazprom, the majority state-owned gas company which, by the late 2000s, had become one of the largest companies in the world by market capitalization.⁴⁸

Russian total gas exports in year 2009 estimated at 183.09 Bcm, 176.48 Bcm (96.4%) of it is pipeline exports and 6.61 Bcm (3.6%) is LNG exports. The main external consumers of Russia, whose share is up to 51% of total amount of export, are Germany (31.5 Bcm), Ukraine (24.15 Bcm), Italy (20.80 Bcm) and Turkey (17.26).⁴⁹

Today, Gazprom's share in local gas market is more than 84%. In spite of this, there are companies which have an aggressive future production strategy, such as Novatek, which was planning to produce 45 Bcm in 2010 and 65 Bcm in 2015, and Lukoil, which has similar aspirations. By 2015 non-Gazprom production should be at least 150 Bcm/year and could be as high as 200 Bcm/year.⁵⁰ However, the real picture is that Russia's independent gas producers face substantial uncertainties, many of which are related to Gazprom and Government decision-making on the requirements – in terms of both gas and transport capacity – and regulation of the

⁴⁶ Korzhubayev Andrey, "*Hydrocarbon Arteries of Russia*", Oil of Russia internet magazine, (No.2 2009), December 2, 2010 <http://www.oilru.com/or/39/787/>

⁴⁷ Gazprom press conference on export diversification, June 18, 2008

⁴⁸ Pirani Simon, "Russian and CIS gas markets and their impact on Europe", (Oxford University Press, Oxford, UK, 2009), p.55

⁴⁹ "BP Statistical Review of World Energy. June 2010"

⁵⁰ "Optimizing Russian Natural Gas: Reform and Climate policy", IEA/OECD, (Paris, 2006), Table 1, p.33

domestic market.⁵¹ Besides, cementing Gazprom's role as Russia's sole natural gas exporter, the law extends the company's export monopoly to liquefied natural gas (LNG), and liquefied petroleum gas (LPG). "The principle of a unified export channel has always been part of our export strategy, though it hasn't been set out in any normative documents or legislation," Gazprom spokesman Sergei Kupriyanov said. "Now it will become the law."⁵² All it means is that currently any development of independent gas producers is fully relied on Gazprom's desire to involve such company in its own business cycle or not. The vivid example here is Gazprom and Novatek agreement, signed on March 23, 2010, regulating the terms and conditions of the export of liquefied natural gas produced by Novatek as part of the Yamal LNG project. Gazprom will export the LNG from Yamal, and will return a portion of the revenue to Novatek.⁵³

2.2. Gazprom - Russian quasi-gas-monopoly (profile)

To understand Gazprom's economic power and expansion potential, it is necessary to consider the company's profile.

Gazprom is Russia's largest joint stock company with several hundred thousand registered stockholders domiciled both in Russia and abroad. The largest shareholder of Gazprom is the state⁵⁴ (see Table 1). In mid-2005, after state run OAO Rosneftegaz acquired a 10.74% stake in OAO Gazprom, the share of the Russian Federation in OAO Gazprom grew to a controlling

⁵¹ For more detail on the challenges facing independent producers see Institute of Energy Policy, "*Puti realizacii potentsiala*"

⁵² Boykewich Stephen, "*Gazprom's export monopoly cemented*", Moscow Times, (6/5/06), December 4, 2010, http://www.ocnus.net/artman2/publish/Business_1/Gazprom_s_Export_Monopoly_Cemented_25014.shtml

⁵³ "Gazprom Monopoly challenged?", *Eastweek*, (31/03/2010), December 5, 2010, <http://www.osw.waw.pl/en/publikacje/eastweek/2010-03-31/gazproms-monopoly-challenged>

⁵⁴ "Who owns Gazprom shares?", *Gazprom in Questions and Answers*, December 10, 2010, <http://eng.gazpromquestions.ru/?id=10>

stake of 50.002 per cent. The move enabled government to reinforce the state's control over the Company, being of strategic significance for the national economy. Throughout 2008 the share capital structure didn't undergo substantial changes.⁵⁵

Currently, Gazprom's Chairman of the Board of Directors is Viktor Alexeyevich Zubkov, who succeeded Dmitry Anatolyevich Medvedev on June 27, 2008. Zubkov was the Prime Minister of Russia in the period September 2007 - May 2008, until Putin had taken over this position. However, Zubkov is still connected with the government by holding the post of First Deputy Prime minister. Gazprom's Deputy Chairman of the Board of Directors and Chairman of Management Committee is Alexey Borisovich Miller. It's worth pointing out, that from 1991 to 1996 Miller has been working at the Committee for External Relations of the Mayor's Office in Saint Petersburg, under Vladimir Putin.

According to the Gazprom's Financial Report 2009⁵⁶, prepared under International Financial Reporting Standards (IFRS), net profit generated by the company was RUB624.6 bln (USD 20.8bln), the growth in comparison with 2008 is 261%. While total revenue in the same period was RUB2,486.9bln (USD 82.9bln), which is relatively the same result as in 2008 (RUB2,507.0bln or USD83.6bln). Such imposing net profit growth, in spite of similarity of revenue amounts, is the result of additional income sources (Item: Other Income and Expenses), mainly related to the Gazprom's investments in other companies and benefits received from tax concessions. Thereby, according to the publication of the Fortune Global 500, Gazprom became the world's most profitable company in 2009 despite ranking 50th in revenue.⁵⁷

⁵⁵ "Gazprom in questions and answers", *Gazprom in Questions and Answers*, November 28, 2010, <http://eng.gazpromquestions.ru/?id=10>

⁵⁶ "Gazprom most profitable firm on Fortune Global 500", *The Economic Times*, (09/07/2010), December 16, 2010, <http://economictimes.indiatimes.com/articleshow/6148434.cms>

⁵⁷ "Gazprom most profitable firm on Fortune Global 500"

The cost of fixed assets of the company at the end of 2009 was RUB9,431.4bln (314.4bln USD), with three main items as Buildings – RUB342.8bln (USD11.4bln), Structures and transfer mechanism - RUB7,903.4bln (USD263.4bln), Machinery and equipment - RUB1,177.3bln (USD39.2bln). According to the PFC Energy's Top 50 Energy Companies for 2009, Gazprom's market capitalization reached USD 144.2bln, that refers to the 10th place in the list.⁵⁸

Gazprom holds the richest natural gas reserves in the world. Its share in the global and Russian gas resources accounts for around 17% and 70%, respectively.⁵⁹ According to Russian A+B+C1 classifications Gazprom's reserves are 33.6 Tcm. Gazprom's 2009 production was at the level of 461.5⁶⁰ Bcm that is 87.5% of total Russian production same year. The company is responsible for 10% of Russia's GDP⁶¹ and about 20% of the Russian federal budget's revenues.⁶²

2.3. Gazprom's political involvement.

There are many discussions about interconnection of Gazprom and Russian Government, which is more than formal relationships between authority and economic entity of the state. There is also highly circulating statement that particularly since Vladimir Putin rose to power

⁵⁸ "PFC Energy 50", *PFC Energy official site*, December 16, 2010, <http://www.pfcenergy.com/pfc50.aspx>

⁵⁹ "Gazprom in questions and answers"

⁶⁰ "Production", *Gazprom official page*, December 2, 2010, <http://www.gazprom.com/production/>

⁶¹ Zhdannikov Dmitry, "Gazprom debt burden to speed up gas crisis end", Reuters, (Jan 12, 2009), December 5, 2010, <http://uk.reuters.com/article/idUKTRE50B4LH20090112>

⁶² Blagov Sergei, "Gazprom Monopoly will continue to favor domestic market", *Eurasia Daily Monitor*, (Issue 105, June 3 2008), December 6, 2010, [http://www.jamestown.org/single/?no_cache=1&tx_ttnews\[tt_news\]=33686](http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=33686)

nearly a decade ago, shows just how politicized the company is.⁶³ "To a large extent, Gazprom is almost a proxy for the government," said Chris Weafer, chief strategist at UralSib, a Russian investment bank. "It is the state's company and its most important asset."⁶⁴ There are more evidences of such fact than its refutations.

As it was already mentioned, Gazprom is the quasi-gas monopoly, where Government is the main shareholder, the shareholder who creates all necessary conditions to strengthen Gazprom's position in both local and overseas markets. It includes granting to Gazprom the status of sole gas exporter of natural gas, LNG and LPG, control under UGSS, and primary right to develop main gas fields in the country such as Yamal Peninsula fields and the Shtokman field in the Barents Sea. With support of the Government, Gazprom has also tried to squeeze out foreign companies from the Russian domestic market. It succeeded in taking control from Shell and BP of the vast Sakhalin-2 project.⁶⁵ As political scientist Margarita Balmaceda asserts, in Russian Government's point of view, the break-up of the Gazprom monopoly - or of Gazprom itself - would be a mixed blessing: it would reduce Gazprom's political power vis-a-vis the state, but it would also deprive the state of a foreign policy weapon for eventual use.⁶⁶

The Gazprom's involvement in foreign policy of Russia can be vividly demonstrated by the Russia-Ukraine gas crisis. When in January 2009 Gazprom cut off all supplies to Europe travelling through Ukrainian pipelines, intensifying the political and economic crisis that has arisen out of a payments dispute between the two countries.⁶⁷ The most remarkable fact

⁶³ "Gazprom, Russian's largest company, acts more like a government", *The Huffington Post*, (Jan 14, 2009), December 7, 2010, http://www.huffingtonpost.com/2009/01/14/gazprom-russias-largest-c_n_157858.html

⁶⁴ "Gazprom, Russian's largest company, acts more like a government"

⁶⁵ Yasmann Victor, "Putin's Choice: A profile of Dmitry Medvedev", *RFE/RL*, December 10, 2010, <http://www.globalsecurity.org/wmd/library/news/russia/2008/russia-080323-rferl01.htm>

⁶⁶ Balmaceda Margarita, "EU Energy Policy and Future European Energy Markets: Consequences for the Central and East European States", Untersuchungen des FKKS 27/2002, (Germany, Mannhei, Universität Mannhei, 2002), p.23

⁶⁷ Gow David, "Russia-Ukraine gas crisis intensifies as all European supplies are cut off", *Guardian*, (January 2009), December 1, 2011 <http://www.guardian.co.uk/business/2009/jan/07/gas-ukraine>

is that such decision cost Gazprom a massive financial losses, which is around \$200 million a day, however, political goals, as destabilizing current political regime - hostile to the Russia and portraying Ukraine as an absolutely unworthy partner for Europe and an extremely unreliable transit country⁶⁸, were reached.

But actual connection go further than the official one - block of shares possession by government, current political elite in the face of President Dmitri Medvedev and Prime-Minister Vladimir Putin, are highly associated with Gazprom.

President Putin's particular attention to the gas business and his eagerness in advocating Gazprom's interests were well-known, there have been also multiple speculations that he fancies the position of CEO after the expected transfer of power to a new leader in May 2008.⁶⁹ The mechanism that supports Putin's personal involvement in the gas business has always remained opaque as both the Kremlin and the Gazprom HQ are hermetically closed entities that tolerate no leaks.⁷⁰ However, such involvement can be confirmed, or at least supported, with the facts that current Gazprom's Chairman of the Board of Directors - Viktor Zubkov is the former prime minister, who was holding this position during Putin's presidency and currently present Putin's First Deputy Prime minister, while Gazprom's Deputy Chairman of the Board of Directors and Chairman of Management Committee Alexey Miller has known Putin and as mentioned before, was even serving under Vladimir Putin in the Committee for External Relations of the Mayor's Office in Saint Petersburg, and finally Dmitri Medvedev who became Putin's appointed successor to the Russian presidency.

⁶⁸ Torbakov Igor, "Commentary: The Russia-Ukraine Gas Crisis: The Big Picture", Eurasia Daily Monitor Volume: 6 Issue: 11, (January 19, 2009), December 10, 2011, http://www.jamestown.org/single/?no_cache=1&tx_ttnews%5Btt_news%5D=34373

⁶⁹ Lagorce Aude, "Will Gazprom be Vladimir Putin's retirement haven?", Market Watch, (May 16 2007)

⁷⁰ "Putin and Gazprom: Decision making on gas projects in Russia", *Alexander's Gas and Oil Connections*, (October 2005), November 19, 2010, <http://www.gasandoil.com/goc/marketintelligence/russia/putin-and-gazprom.html>

At the position of first Deputy Prime Minister and Gazprom's board Chairman, Medvedev took a leading role in the creation and putting into action Gazprom's aggressive strategy towards energy markets of CIS region. He was responsible for the Gazprom's "hostile" pricing policy - higher gas tariffs for Ukraine, Belarus and Georgia in the period of 2004-2006. At the same time Medvedev used Gazprom's increasing economic power in order to promote the Kremlin interests beyond the energy sector.

The Kremlin's attack on these 'people who fuse power and capital', as Putin put it⁷¹, began during first months after Putin's election in March 2000, and was directed to Gusinsky's Media-Most empire, which owned a number of periodicals but most significantly the independent television station, NTV.⁷² To understand importance of NTV as a media platform, it is necessary to note that cable network had 260 partner stations broadcasting in more than 500 hundred Russian cities and towns.⁷³ In 2001, Medvedev headed negotiations with an investment consortium led by U.S. media mogul Ted Turner and financier George Soros over the possible purchase of the troubled NTV. The negotiations failed, Gusinsky had been forced by the Kremlin to leave the country, and NTV, became a part of Gazprom-Media, a subsidiary of Gazprom.⁷⁴ Gazprom soon also gained sway over the publishing arm of Media-Most, which in April 2001 ceased publication of the daily newspaper Segodnya and replaced the staff of the weekly magazine Itogi. Gazprom-Media also gained control over the Ekho-Moskvy radio station and TNT.⁷⁵

⁷¹ Fortescue Stephen, *"Russia's Oil Barons and Metal Magnates: Oligarchs and State in Transition"*, (Palgrave Macmillan, 2006), p.12.

⁷² Sakwa Richard, *"Putin and the Oligarchs"*, New Political Economy, (Vol.13, No.2, June 2008), p.186

⁷³ Ross Cameron, *"Russian Politics under Putin"*, (UK, Manchester, Manchester University Press, 2004), p.140

⁷⁴ Yasmann Victor, *"Putin's Choice: A profile of Dmitry Medvedev"*, RFE/RL, December 10, 2010,

<http://www.globalsecurity.org/wmd/library/news/russia/2008/russia-080323-rferl01.htm>

⁷⁵ Ross Cameron, *"Russian Politics under Putin"*, (UK, Manchester, Manchester University Press, 2004), p.140

Therefore, politicization of Gazprom's decision-making processes towards local and overseas markets has enough grounds to be proven. For this reason, the assertion that Gazprom's expansion aspirations are also dependent on political ambitions of the state will be used in this work as part of reasoning of European countries' opposition vis-a-vis expansion strategy of Russia's Gazprom into European gas market.

CHAPTER 3. ANALYSIS OF CIS COUNTRIES NATURAL GAS MARKET. CONSIDERATION OF GAZPROM'S ENERGY POLICY HERE AS THE PART OF EXPANSION INTO EUROPEAN MARKET STRATEGY

The CIS natural gas market involves many states in the region. But their consideration within the framework of this work will be limited based on potential to influence the European gas interests. To this date, only three countries, beside Russia, have such potential. These countries are Azerbaijan, Turkmenistan and Kazakhstan. We do not take into account Ukraine and Belarus, which bear the function of CIS gas transferring to Europe and don't have possibility to "fill the tube" independently.

Azerbaijan, Turkmenistan and Kazakhstan are the part of European agenda towards Energy security. The reason is not only their substantial gas reserves but geographical location, which gives optimal way to link all parties to deliver the gas to European customers. The core of the agenda is Nabucco pipeline project. The pipeline will link the Eastern border of Turkey, to Baumgarten in Austria via Bulgaria, Romania and Hungary. In its turn Nabucco is planned to be filled with Azeri gas via projected Shah Deniz II pipeline and in long-term perspective with gas from Turkmenistan and Kazakhstan via Trans-Caspian Gas Pipeline.

The goal of this part is to evaluate current condition of the local markets of these countries and perspectives to cover Europe's gas demand by them.

3.1. *Kazakh Natural Gas Market.*

BP estimates⁷⁶ 2009 Kazakhstan's proven gas reserves at 1.82 Tcm, with a 1.0% of global share. Kazakhstan has the 17th largest natural gas reserves in the world and 3rd in the CIS region. Such position makes Kazakhstan one of the major gas suppliers in the Post-soviet Area, together with Russia, Turkmenistan and Azerbaijan.

However, talking about volume of reserves, the level of gas production should be considered, where Kazakhstan has achieved considerable growth, from 9.0 Bcm in 1999 to 32.2 Bcm in 2009 (258% growth). According to several official forecasts, Kazakhstan's gas production in 2015 could vary between 60 and 80 Bcm per annum and could potentially reach 100 Bcm by 2020.⁷⁷ Kazakhstan's local consumption is estimated at 19.6 Bcm in 2009, which is 2.1% (20.1 Bcm) less than in previous year - such drop is explained by the common economic downturn in year 2008. The total growth of Kazakh gas consumption in past decade was 154.5%, when yearly average growth 10.3%.⁷⁸. Thereby, taking into account the difference between forecasted production and consumption, we can estimate that volume of gas available for export could potentially reach 57.6 Bcm in 2020.

Kazakhstan's resource base and production capacity potentially could cover Europe's needs of natural gas in the future. However, entering of Kazakhstan into European market also depends on several factors as external demand on Kazakh gas and possibility of its transportation towards European borders.

⁷⁶ "BP Statistical Review of World Energy. June 2010"

⁷⁷ Yeniekeyeff Shamil, "*Kazakhstan's Gas Export Markets and Export Routes*", (Oxford Institute for Energy Studies, Oxford, UK, 2008), p.20

⁷⁸ Yeniekeyeff Shamil 20

In 2009 the main Kazakhstan's external gas consumer was Russia with a 9.82 Bcm, what is 95.3% of total export. The remaining 4.7% is divided between Moldova with 0.44 Bcm (4.3%) and Kyrgyzstan with 0.04 Bcm (0.4%).⁷⁹ Karachaganak field holds the most of Kazakh's natural gas reserves and located in the Karachaganak field, with proven capacity of 1.36 Tcm. Russia's Orenburg natural gas processing plant is the main destination for the Karachaganak's output. Based on the agreement between Gazprom and Kazmunaigas in 2008, a joint venture KazRosGas was created, which will manage the Orenburg plant by 2012. The 7.93 Bcm of Karachaganak gas was delivered to the Orenburg plant in 2008. While the volume of Kazakh gas processed at Orenburg plant is projected to exceed 17.56 Bcm by 2012.⁸⁰

Necessary to mention, the Kazakh newly discovered world's largest oil field located in the North Caspian Sea approximately 50 miles offshore from Atyrau. The field is operated by ENI at 18.52% and partnered by ExxonMobil (18.52%), Shell (18.52%), Total (18.52%). The Kashagan also concentrates imposing gas reserves, which are estimated at 489.5 Bcm.⁸¹ Once projected to have already begun operation, the Kashagan project is now set to come online in 2013.⁸² Currently Kashagan doesn't participate in national gas production cycle, but has a huge potential in the future.

Kazakhstan has two separate export oriented natural gas distribution networks, which are the Central Asia Gas Pipeline (CAGP) and Central Asia Center (CAC). The CAC operation network, managed by Gazprom, has two branches of gas pipeline, which meet in the Beyneu city (southwestern Kazakhstan) with its final destination point in Alexandrov Gaiand – part of the

⁷⁹ "BP Statistical Review of World Energy. June 2010"

⁸⁰ "Kazakhstan: Natural Gas", *US Energy Information Administration; Independent Statistics and Analysis*, December 7, 2010, <http://www.eia.doe.gov/cabs/Kazakhstan/NaturalGas.html>

⁸¹ Campaner, Nadia, "The Kashgan field: A test case for Kazakhstan's Governance of its Oil and Gas Sectors", *Gouvernance européenne et géopolitique de l'énergie*, (2008), December 10, 2010, <http://www.ifri.org/files/Energie/Kashaganbis.pdf>

⁸² Cutler Robert, "Kazakhstan looks at the Trans-Caspian for Tengiz gas to Europe", Central Asia-Caucasus Institute, (01/28/2009), December 8, 2010, <http://www.cacianalyst.org/?q=node/5023>

Russian pipeline system.⁸³ The western branch takes its roots on Turkmenistan's Caspian seacoast and has a capacity of 4.98 Bcm/year. The eastern branch originates in Turkmenistan's southeastern gas fields and has a capacity of 59.5 Bcm/year. In December 2007, Russia, Kazakhstan and Turkmenistan announced signing an agreement to renovate and expand the western branch of the CAC pipeline and to construct a new Caspian gas pipeline paralleling the western branch with a capacity of 19.99 Bcm.⁸⁴ This new pipeline, with a total capacity of 79.3 Bcm, is planned to be launched in 2012. However, as the result of Russia-Turkmen dispute (the subject will be deeply considered later in the work), construction of the pipeline has been paused in 2009.

Necessary to note, that in 2007, the new player had appeared on Kazakh natural gas market. China's CNPC pledged to invest \$2.2 billion in CAGP, which starts at Gedaim on the border of Turkmenistan and Uzbekistan and extends 1,130 miles across Kazakhstan east to the Chinese border.⁸⁵ CAGP system capacity to around 50 Bcm/year in order to accommodate Kazakh and Uzbek exports as well as the Turkmen baseload.⁸⁶ The future capacity of CAGP is 60 Bcm/year committed by the three states – Turkmenistan (40), Uzbekistan (10) and Kazakhstan (10).⁸⁷

Currently, Kazakhstan has one main gas exporter - Russian Gazprom. As it was already noted the volume of natural gas consumed by Gazprom in year 2009 reached 95.3% of total Kazakh's export. But starting from December 2009 Chinese CNPC became a new player on the Kazakh gas market. There are also numerous proposals to bring Central Asian gas to European

⁸³ "Kazakhstan", *Kazakhstan Energy Data, Statistics and Analysis – Oil, Gas, Electricity, Coal*, (2010), p.7, December 10, 2010, <http://www.eia.gov/emeu/cabs/Kazakhstan/pdf.pdf>

⁸⁴ "Kazakhstan" 7

⁸⁵ "Kazakhstan" 7

⁸⁶ "Kazakhstan" 7

⁸⁷ "Defining year for Caspian Gas", *Energy Economist magazine*, (01/01/2010), December 9, 2010, http://www.stroytransgaz.com/press-center/smi/energy-economist/01_01_2010

markets by pipeline through Caspian Sea. However, the probability of Kazakhstan's entering into European gas market is quite low in a short period of time.

3.2. Turkmen Natural Gas Market.

Turkmenistan is the CIS's second largest gas producer, and second largest gas exporter, after Russia.⁸⁸ By current internationally-recognized gas reserves, Turkmenistan is fourth-largest⁸⁹ in the world. BM cites proven reserves of 8.10 Tcm⁹⁰, which is 4.3%⁹¹ of total world gas reserves. Today, gas deposits found in Turkmenistan include 139 onshore and 10 on the Caspian shelf.⁹²

But reality is close to Kazakhstan's case where Russia is dominant exporter of local gas. Currently, Gazprom has major share of Turkmen gas exports, based on Russian-Turkmen 25-year Cooperation Agreement (2003). Under the Agreement, Gazprom Export (Gazprom's wholly owned subsidiary) and Gas Transmission Company Turkmenneftegaz made a long-term contract to purchase and sell Turkmen natural gas.⁹³

In addition to the above, in 2007 Russia and Turkmenistan signed the Agreement on the Pre-Caspian gas pipeline construction, the purpose of which is conveying natural gas from the Caspian Sea fields and other locations in Turkmenistan and the Republic of Kazakhstan to Russia.

⁸⁸ Pirani Simon, "Russian and CIS gas markets and their impact on Europe", (Oxford University Press, Oxford, UK, 2009), p271

⁸⁹ "Turkmenistan seeking foreign bids for offshore gas fields", Energy-Pedia, (14/02/2010), December 10 2010, <http://www.energy-pedia.com/article.aspx?articleid=139011>

⁹⁰ "BP Statistical Review of World Energy. June 2010"

⁹¹ "BP Statistical Review of World Energy. June 2010"

⁹² Nyryev Akhmetzhan, "Bogatstvo kladovykh "golubogo topliva"", December 1 2010, <http://www.turkmenistan.ru/>

⁹³ "Gas purchases", Gazprom official site, November 22 2010, <http://www.gazprom.com/production/central-asia/>

However, dramatic shutdown in gas export was observed in 2009, the reason of which was Russia-Turkmenistan gas dispute. The CAC-4 pipeline was originally closed because of an explosion on April 9th 2009, which Turkmenistan blamed on Gazprom. Turkmenistan announced on September 18th 2009 that the pipeline had been repaired, but that "technical discussions" with Gazprom precluded an immediate resumption of exports. In practice, the dispute has for some time openly been about the price that Gazprom is willing to pay for Turkmenistan's gas.⁹⁴ As the result in December 2009 Gazprom and Turkmengaz signed the amendments to the long-term gas purchase and sale contract. Early in 2010 Turkmen gas supplies were recommenced. Since January 1, 2010 the gas price has been regulated under the equation adjusted for petroleum products pricing,⁹⁵ pricing dispute was resolved.

Thereby, according to the statistical data in 2009 the total Turkmenistan's gas export was 16.73 Bcm, the explosion reduced daily gas deliveries from Turkmenistan to Russia to just 8% of their previous level and, over the year, led to massive cutbacks in both production and exports.⁹⁶ According to the 2009 BP's statistical reviews⁹⁷ Turkmen gas output fell to just 32.2 Bcm from 59.5 Bcm in 2008 and exports had failed to 16.73 Bcm from 55.00 Bcm in the previous year⁹⁸. Moreover, in spite of the fact that Russia guaranteed to resume natural gas imports from Turkmenistan in 2010⁹⁹, it has cut the volume of gas purchased to 10.66 Bcm.

However, the dispute made Turkmenistan to look for diversification of gas consumers. In July 2009, Turkmenistan and Iran signed the agreement to increase gas imports up to 0.034

⁹⁴ "Turkmenistan economy: Life in a downturn", *The Economist: Economist Intelligence Unit*, (04/11/2009), November 26 2010, http://www.eiu.com/index.asp?layout=VWArticleVW3&article_id=1094963494®ion_id=&country_id=70000007&channel_id=190004019&category_id=500004050&refm=vwCat&page_title=Article&rf=0

⁹⁵ "Gas purchases", *Gazprom official site*, November 22 2010, <http://www.gazprom.com/production/central-asia/>

⁹⁶ "Defining year for Caspian Gas", *Energy Economist magazine*, (01/01/2010), December 9 2010, http://www.stroytransgaz.com/press-center/smi/energy-economist/01_01_2010

⁹⁷ "BP Statistical Review of World Energy. June 2010"

⁹⁸ "Defining year for Caspian Gas"

⁹⁹ "Defining year for Caspian Gas"

Bcm/day, comparing with 0.023/day before.¹⁰⁰ As the result, in 2009, the share of Russia in Turkmen gas exports failed to 63.7%, Iran became the second largest Turkmen gas consumer with 5.77 Bcm (34.5%), and third one was Kazakhstan with 0.3 Bcm (1.8%). Iran is expected to be the lead customer of Turkmen gas in 2009. However, it is possible that already in 2011, China will replace Iran on that place, thanks to CAGP pipeline.

3.3. Azerbaijani Natural Gas Market.

According to the BP's statistical overview¹⁰¹, Azerbaijan's proven gas reserves in year 2009 were 1.31 Tcm, which is 0.7% of the global gas reserves.

In 2009, Azerbaijan produced 13.3 Bcm, which is the same result with a previous year. However, the country showed substantial leap of gas production in 2008, the growth rate reached 51%, and 125% growth over past decade. The local gas consumption in 2009 was 7.7 Bcm, which is 16% less than the same index in 2008. The share of Azerbaijan in total world consumption was estimated at 0.4%.

Majority of Azeri natural gas is produced from offshore fields. The biggest natural gas field in the country is the Shah Deniz field, which started operating in 2006. The Guneshli field provides gas for domestic use, via an undersea gas pipeline to Sangachal Terminal at Baku. The Sangachal Terminal, as the world's largest integrated oil and gas processing terminals, receives,

¹⁰⁰ "Iran; Natural Gas", *US Energy information Administration; Independent Statistics and Analysis*, December 7 2010, <http://www.eia.doe.gov/cabs/Iran/NaturalGas.html>

¹⁰¹ Pirani, Simon, "*Russian and CIS gas markets and their impact on Europe*", (Oxford University Press, Oxford, UK, 2009), p.271

stores, and processes both crude oil and natural gas from the ACG fields and from Shah Deniz, then ships these hydrocarbons through the BTU and SCP pipelines for export.¹⁰²

In 2009 Azeri gas export was on the level of 7.19 Bcm. 4.96 Bcm or 69%. of it was purchased by Turkey . The second largest consumer was Georgia with 1.33 Bcm and 18.5% share. The remaining 0.9 Bcm was divided between Greece and Iran as 7.0% and 5.6%.

As at the end of 2009 Russia wasn't involved in Azerbaijan gas export. However, based on agreement signed between Azerbaijan state energy company Socar and Gazprom in 2009¹⁰³, starting from January 1 2010, Azeri natural gas in the amount of 1 Bcm¹⁰⁴ will be delivered to Russia during the year via Gazi-Magomed-Mozdok pipeline, which was import oriented in the past. Moreover, In September 2010 in Baku, Gazprom and Socar signed a new agreement, which assumes purchasing of 2 Bcm in 2011 and further increase of this volume from 2012.

The core of Azerbaijan's natural gas exports is the 555-mile South Caucasus Pipeline (SCP), also referred to as the Baku-Tbilisi-Erzurum pipeline (BTE), with the final point in Erzurum, Turkey.¹⁰⁵ The estimated capacity of the pipeline is about 21.8 Bcm /year. The gas from the pipeline covers the Georgia and Turkey demand.

Azerbaijan also exports natural gas to Iran via the Baku-Astara Pipeline. In early 2010, Iran and Azerbaijan signed an additional agreement which assumes increase in gas imports from Azerbaijan to Iran, and volumes are likely to increase with the renovation of the pipeline and upgrades to the Astara gas compressor.¹⁰⁶

¹⁰² "Azerbaijan; Natural Gas", *US Energy information Administration; Independent Statistics and Analysis*, December 7 2010, <http://www.eia.doe.gov/cabs/Azerbaijan/NaturalGas.html>

¹⁰³ "Azerbaijan; Natural Gas"

¹⁰⁴ "Gas purchases", *Gazprom official site*, November 22 2010, <http://www.gazprom.com/production/central-asia/>

¹⁰⁵ "Azerbaijan; Natural Gas"

¹⁰⁶ "Azerbaijan; Natural Gas"

In years 2014-2015, the European Union also plans to enter Azerbaijan gas market, thanks to the gas stalemate between Turkey and Azerbaijan planning the phase-2 development of Azerbaijan's Shah Deniz field. Output from which may play an important role in Europe's energy diversification efforts. Shah Deniz phase-2 is expected to produce up to 20 bcm of additional gas supplies and a variety of infrastructure projects—from the Nabucco gas pipeline, the Interconnector-Turkey-Greece-Italy (ITGI), and Trans-Adriatic Pipeline (TAP), among others—have been counting on gas from this project to provide throughput supplies.¹⁰⁷

3.4. Gazprom's strategy on market of CIS region.

Russia's energy policy towards CIS region has, in the recent years, underwent a fundamental transformation from the previous business schemes of trade relations conducted according to a model of "gas for friendship" towards a more assertive "gas for cash" approach.¹⁰⁸ Priorities changed for Russia; the short-term economic advantage was replaced by the long-term geopolitical perspectives, where Gazprom plays major role.

In early 2008 Gazprom, Kazmunaigas, Uzbekneftegaz and Turkmengaz officially announced a shift to European gas prices in Central Asia in 2009. Yet there is no clear-cut formula on gas and not all the aspects have been arranged between the sides.¹⁰⁹ Later Gazprom entered into

¹⁰⁷ "Azerbaijan, Turkey Agree on Gas Price, Supply, and Transit Terms", *Global Insight*, (08/06/2010), December 01 2010, <http://www.ihsglobalinsight.com/SDA/SDADetail18794.htm>

¹⁰⁸ Svoboda, Karel, "Gazprom's Pricing Policy", Aleksanteri Institute, December 02 2010, <http://www.helsinki.fi/aleksanteri/conference2010/abstracts/svoboda.html>

¹⁰⁹ Tomberg Igor, "Gazprom and CIS: common strategy on external markets", Strategic Culture Foundation online magazine, (23/06/2008), December 02 2010, http://www.gab-ibn.com/IMG/pdf/Re9-Gazprom_and_CIS_common_strategy_on_external_markets.pdf

Azerbaijani gas market by signing the agreement with Azerbaijan state energy company Socar, which assumes purchasing sufficient volume of natural gas at the same pricing approach.

Gazprom's deal with the partners in CIS region came as unexpected but a decisive step to keep control under markets which are in the sphere of European interests. There is only one explanation why Russia, as a state with the biggest gas reserves and streamlined infrastructure, purchases gas from other countries at the market price, Russia tries to deprive Europe of alternative south gas route, to fulfill fuel deficit by its own export opportunities.

The main project, which involved Turkmenistan, Azerbaijan and Kazakhstan into European plans to bring Central Asian gas to Europe, was Trans-Caspian Gas Pipeline (TCGP). The original TCGP had been planned by Bechtel, General Electric, and Royal Dutch Shell during the late 1990's, for a total capacity of 32 Bcm/year, in two stages of 16 Bcm each (the first stage was planned to supply Turkey, the second was envisaged for Europe).¹¹⁰ However, that project lost out to Gazprom in a race for the Turkish market by 2001. Western support dissipated after that, and Russia intimidated Turkmenistan into silence about a trans-Caspian pipeline until now.¹¹¹

On November 18-19, 2010, Turkmenistan mentioned the possibility to deliver to Europe about 40 Bcm of natural gas annually, via a pipeline through the Caspian Sea, which will be linked up to the Nabucco project. The decision appeared as the result of 2009 Russian-Turkmen gas dispute, when, as analytics assert, Turkmenistan was losing an estimated USD1bn per month

¹¹⁰ "Turkmenistan Encourages Trans-Caspian Gas Pipeline", *Georgian Daily Independent Voice*, (11/12/2010), December 15 2010, http://georgiandaily.com/index.php?Itemid=141&id=20632&option=com_content&task=view

¹¹¹ Socor Vladimir, "Turkmenistan Encourages Trans-Caspian Gas Pipeline", *Eurasia Daily Monitor*, (Volume: 7 Issue: 201, 13/12/2010), December 15 2010, [http://www.jamestown.org/programs/edm/single/?tx_ttnews\[tt_news\]=37267&cHash=42f89f6b52](http://www.jamestown.org/programs/edm/single/?tx_ttnews[tt_news]=37267&cHash=42f89f6b52)

in export revenue.¹¹² This situation pushed Turkmenistan to looking for diversification of its gas sales abroad.

Concerning Kazakhstan it can't be said that this country is actively looking for gas export opportunities in Europe, but existence of Kashagan as international project, which is conveniently located in Kazakhstan's Caspian offshore, contributes into desire to pipe this gas under the Caspian Sea to Azerbaijan so as to enter the South Caucasus Pipeline (Baku-Tbilisi-Erzurum) and eventually, through Turkey, reaches Europe.¹¹³

But there are some obstacles, which don't allow Turkmenistan and Kazakhstan to acquire the status of new European gas suppliers at the nearest future. The first one is unresolved legal status of the Caspian Sea is a stumbling block insofar as Turkmenistan, the same as Kazakhstan, feels obliged to take Russia's interests into account in formulating its own energy export policy. Russia insists, as a way of blocking the TCGP, that the agreement of all five littoral states is necessary for any trans-Caspian pipeline to be built.¹¹⁴ The second one is current economic interconnections between countries. Gazprom today dominates on Central Asian energy market. As it was already noted, in year 2009, the volume of Kazakh gas purchased by Gazprom reached 9.82 Bcm, what is the 95.3% of total export of the state, when share of Gazprom in gas export of Turkmenistan in the same year was 63.7% (10.66 Bcm). Thereby, the most real opportunity for Europe to bring gas from the East to its borders, is Azerbaijan's Shah Deniz phase-2 project.

In regards to Azerbaijan, Gazprom's position was quite precarious in the not far past. We can support this fact mentioning that till the end of 2009 Gazprom wasn't involved in

¹¹²“Turkmenistan economy: Life in a downturn”, *The Economist: Economist Intelligence Unit*, (04/11/2009), November 26 2010, http://www.eiu.com/index.asp?layout=VWArticleVW3&article_id=1094963494®ion_id=&country_id=70000007&channel_id=190004019&category_id=500004050&refm=vwCat&page_title=Article&rf=0

¹¹³ Cutler, Robert, “Kazakhstan looks at the Trans-Caspian for Tengiz gas to Europe”, Central Asia-Caucasus Institute, (01/28/2009), December 8 2010, <http://www.cacianalyst.org/?q=node/5023>

¹¹⁴ See previous

Azerbaijani gas market at all. But already starting from 2010 based on the agreement between Gazprom and Socar, the volume of gas planned to be exported is 1 Bcm, with a further increasing of this figure up to 2 Bcm in 2011. The volume of gas export is limited only with a capacity of the Gazi-Magomed-Mozdok pipeline, which is 8 Bcm/year.

But still, Azerbaijani government insists that cooperation with Gazprom won't affect plans to deliver Azerbaijani gas to the European consumers. In a March 30, 2010 Socar President Rovnag Abdullayev stressed that the deal with Gazprom will not touch gas from Stage 2 of the Shah Deniz project, a mega gas source (10-12 bcm per year), scheduled to come online in 2014-2015. It is Stage 2 gas that has been the focus of competition between Russia and European Union countries. "This gas [from "Shah Deniz] is a matter for separate negotiations," Abdullayev said. "The memorandum with Gazprom is about gas from Socar's own fields."¹¹⁵

But the main question does Russia really seek to increase its imports of Azerbaijani gas to the maximum possible extent, so as to reduce the volumes available to Nabucco¹¹⁶ as political analyst Vladimir Socor asserts. It sounds more like utopia than reality. According to the author point of view reality is more complicated than it seems.

As Socar President Rovnag Abdullayev said - "Selling gas for a good price "is one of the main interests of Azerbaijan and we are considering any route and conducting talks with companies and countries."¹¹⁷ Gazprom currently buys Azeri gas at market price and has a strong

¹¹⁵ Abbasov Shahin, "Azerbaijan: Gazprom Deal Means No Change for Baku's energy Policy", Eurasianet.org, (31/03/2010), December 14 2010, <http://www.eurasianet.org/departments/insightb/articles/eav040109.shtml>

¹¹⁶ Socor Vladimir, "Nabucco, Azerbaijan's Shah Deniz field require synchronized development", News.Az, (06/10/2010), December 14 2010 <http://www.news.az/articles/economy/24071>

¹¹⁷ Abbasov Shahin

desire to increase its volume in a short period of time. Investment in Phase 2 of the Shah Deniz project is estimated at \$16 billion, compared to the \$5 billion invested in Phase 1. Is there any economic point for Azerbaijan to invest in risky perspective, rather than use currently available offers? Russia has price dumping advantage over Azerbaijan on European market, when dumping for Azerbaijan is money loss on gas which would be sold to Russia at market price, which is not in Azerbaijani interests.

If we consider this situation from the position of European Union, there is conflict of interests - get fuel at remunerative price, but lower energetic security and possibly providing Russia with instruments for political pressure.

CHAPTER 4. ANALYSIS OF NATURAL GAS MARKET OF EUROPE

4.1. European Natural Gas Market.

Natural gas is currently the second most important fuel in the European Union. This represents 25 percent of the total gross inland consumption in the EU (see Figure 2). According to the 2009 Eurostat's statistical overview, EU-27 gross inland consumption was 393.4 billion cubic meters (bcm), which was less than the same index in 2008 by 6.3%.¹¹⁸ The decline in consumption is due to the economic uncertainty following the recent economic crisis in Europe. EU-27 consumption is mainly relied on the biggest European economies as Germany, which consumes 72.6 bcm/year (18.5 percent) United Kingdom- 73.0 bcm/year (18.6 percent), Italy – 60.8 bcm/year (15.5 percent) and France - 36.3 bcm/year (9.2 percent).¹¹⁹ Figure 3 illustrates the intensity of energy consumption in EU-27. The total dependence of EU on gas imports can be regarded as substantial. As at 2009, 81.0 percent (or 318.6 bcm) of the 393.4 bcm total natural gas was imported.¹²⁰

Statistics on the trends in annual dependency rates in the EU show that the EU-27 Energy Dependence Rate increased by 2.8 percent from 61.5 percent in 2008 to 64.3 percent in 2009.¹²¹ The least dependent EU countries are Denmark and the Netherlands, which recorded a negative dependency. The most dependent countries in 2008 were Spain and Italy and later expanded to the United Kingdom, Germany, France and Netherlands in 2009 (see Figure 4). Other countries

¹¹⁸ Keenan Rita. "Statistical aspects of the energy economy in 2009" Eurostat: Statistics in focus (2010):1-12. p.2, 4 November 2011, http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-10-043/EN/KS-SF-10-043-EN.PDF

¹¹⁹ Keenan Rita 2

¹²⁰ Keenan Rita 4

¹²¹ Keenan Rita 4

with moderate dependence in 2009 were Russia at 33 percent, Norway at 28.8 percent and Algeria at 14.7 percent.¹²²

Europe's natural gas market shows heavy dependence on exporters outside the European Union (EU). Statistics show that Europe obtained forty-seven percent of its natural gas supplies from external sources in 2009.¹²³ At present, the leading source of natural gas imports to Europe is Gazprom. Gazprom produces 85 percent of natural gas in Russia and has monopoly share in natural gas export to Europe.

The Natural Gas Information reports that this dependence on the Russian company's gas is disproportionate with Bulgaria, Romania, Slovakia, Latvia Estonia and Lithuania importing more than seventy percent of their natural gas from Russia compared to forty percent dependence in EU countries.¹²⁴ This overdependence and the potential negative impact on EU countries in the event of gas supply disruptions have necessitated the need for gas import diversification.

The EU natural gas market has undergone dramatic changes in the last twenty years. For instance, the UK passed the Oil and Gas Act in 1982 to reduce the monopoly of British Gas and introduce competition in the transmission and distribution of natural gas in the country. The Oil and Gas Act laid the foundation for the creation of licensing schemes for private companies to engage in natural gas transport and supply.¹²⁵

Another change to the EU natural gas market is the introduction of the Network Code. The Network Code is a framework defining the relationship between pipeline system operators

¹²² Keenan Rita 4

¹²³ Keenan Rita 4

¹²⁴ Keenan Rita 4

¹²⁵ Cartea Alvaro and Thomas Williams, "UK gas markets: The market price of risk and applications to multiple interruptible supply contracts" *Energy Economics*, 30.3 (2008), p.830.

and the transporters. Introduced in the UK market, the framework aimed to optimize the safety of the UK gas pipeline system and ensure operational efficiencies in the transmission and distribution of gas by Transco Company.¹²⁶ These operational efficiencies arise from strict monitoring of the gas pipeline system to control the intake of gas into the pipeline system, off-take from the system (withdrawal of gas from the pipeline system) and the physical distribution to the national network. Gas producers or distributors who inject or withdraw more gas from the pipeline than contracted impose additional costs to other pipeline system users.¹²⁷ The Network Code imposes penalties for the distributors or producers for breaching the balancing and tolerance levels of gas and causing supply disruptions in the gas network.

The UK and EU gas markets have certain balancing mechanisms to ensure that system operators use up-to-date market prices of natural gas that are based on the balancing price. This deregulation of has improved gas supplies as distribution is not limited to long-term contracts, but creates a demand for short-term contracts by new entrants to supply gas surpluses to the market. These deregulations and frameworks illuminate the complexity of natural gas production and distribution in the EU.¹²⁸

Although the deregulations exist, natural gas production in the EU is often left in the hands of external parties compared to distribution. This is because each member state implements different competition dynamics that govern the gas industry's value chain.¹²⁹ Factors influencing the production of natural gas in the EU include price, output and competition; efficiency; and capacity. According to Brakman, Marrewijk, and Witteloostuijn, the EU natural

¹²⁶ Cartea Alvaro and Thomas Williams 830

¹²⁷ Cartea Alvaro and Thomas Williams 830

¹²⁸ Cartea Alvaro and Thomas Williams 830

¹²⁹ Brakman, Steven, Charles van Marrewijk, and Arjen van Witteloostuijn. "Market liberalization in the European natural gas market. The importance of capacity constraints and efficiency differences". Tjalling C. Koopmans Research Institute Discussion Paper Series no. 09-15 (2009), p.4

gas industry depicts the Cournot model of industrial organizations.¹³⁰ This model contrasts with the Bertrand model used in gas transport and delivery. As regards competition, a few producers control the EU gas market. Gas is a homogenous product that is produced by few manufacturers in large volumes. The key producers of the EU gas market are Algeria, the Norway, Russia and the Netherlands.¹³¹ These producing countries are characterized by state monopoly in natural gas production.

The second factor affecting the gas production is efficiency. EU gas suppliers are not equally efficient. For instance, the Dutch Gasunie is reported more reliable than Russia's Gazprom Company because the former is a private-public joint venture while the latter is a state-run monopoly prone to management interference.¹³² Additional factors influencing the efficiency of the EU gas market include the cost of gas production and the distribution distance. Gas production depends on geophysical characteristics (such as the cost of developing new gas fields and transporting natural gas to import markets) caused by the depletion of nearby natural gas fields. This implies that future gas production will be more costly and inefficient due as existing gas resources deplete. Figure 5 illustrates the linear gas supply curve of EU suppliers. The curve shows a 98 percent variance in marginal costs arising from supplier inefficiencies.

The final aspect affecting gas production in the EU is capacity. Gas production cannot be expanded ad infinitum. An analysis of the export potential of the three main EU suppliers: Algeria, Norway and Russia show that each supplier faces capacity constraints. Russia's export

¹³⁰ Brakman, Steven, Charles van Marrewijk, and Arjen van Witteloostuijn. "Market liberalization in the European natural gas market. The importance of capacity constraints and efficiency differences". Tjalling C. Koopmans Research Institute Discussion Paper Series no. 09-15 (2009), p.5

¹³¹ Brakman, Steven, Charles van Marrewijk, and Arjen van Witteloostuijn 5

¹³² Brakman, Steven, Charles van Marrewijk, and Arjen van Witteloostuijn 5

capacity is expected to increase marginally to 207 bcm in 2030 from 166 bcm in 2010.¹³³ The marginal increase is caused by the finite availability of natural gas resource. Since natural gas is a nonrenewable resource, the capacity of gas exports is therefore limited to the amount of gas reserves in the three exporting countries.

Despite the capacity constraints of the gas exporting industries, the demand for natural gas in Europe has increased exponentially in recent years. Brakman, Marrewijk, and Witteloostuijn argue that the increased need for gas in power plants and the environmental benefits of gas over coal power have contributed to the rise in gas demand.¹³⁴ Figure 6 shows the total demand for natural gas in the EU particularly, the UK, Spain, Netherlands, Italy, Germany, France and Belgium. The liberalization of the European gas market has also contributed to the increased demand for natural gas. The implementation of the Gas Directive initiated the liberalization of the EU gas market for gas producers and suppliers.¹³⁵

The EU Gas Directive supports the liberalization of the gas industry by defining a regulatory space for each member state. According to the directive, member states should allow third party suppliers to access their local gas market through negotiated or regulated agreements. Member states are also allowed to impose public service regulations on the third-party gas utilities relating to the reliability and security of supply, quality of supply and gas prices.¹³⁶ Presently, individual member states such as France and the Netherlands have implemented policies to support third party access to local gas supply networks. The outcome of the gas

¹³³ Brakman, Steven, Charles van Marrewijk, and Arjen van Witteloostuijn 5

¹³⁴ Brakman, Steven, Charles van Marrewijk, and Arjen van Witteloostuijn 5-6

¹³⁵ Brakman, Steven, Charles van Marrewijk, and Arjen van Witteloostuijn 8

¹³⁶ Brakman, Steven, Charles van Marrewijk, and Arjen van Witteloostuijn 9

market liberalization is the market determination of gas prices based on demand and supply equilibrium.¹³⁷

Presently, Europe's gas industry is characterized by the monopolization of national transmission and distribution. State-owned oil producing companies directly supply about fifty percent of the total gas market and have monopoly control on regional distribution of natural gas.¹³⁸ The state-owned companies in Russia, Algeria, Norway, the UK and the Netherlands have direct connection to the EU pipeline infrastructure for gas reserves. For instance, Gazprom's gas reserves exceed EU gas reserves, and explain Russia's dominance in the gas export market.

Russia's expansion strategy aims to increase dependence on natural gas to make it the leading exporter of natural gas and dominant political power in the EU. Part of the expansion strategy was to increase government stake in Gazprom to fifty percent. This made Gazprom a profitable economic entity that depends on state decisions. Consequently, there has been increasing opposition to the Russian state's involvement in the company and Europe's fear on its over-reliance on Russian gas exports and political involvement in the EU.

4.2 .Gazprom's Expansion Policy towards European Market.

The core of Gazprom's expansion policy centers on two main projects: The Nord Stream Pipeline and the South Stream pipeline. Gazprom has already started work on the Nord Stream, which would transport natural gas from Russia to Germany via a pipeline under the Baltic Sea

¹³⁷ Brakman, Steven, Charles van Marrewijk, and Arjen van Witteloostuijn 8

¹³⁸ Brakman, Steven, Charles van Marrewijk, and Arjen van Witteloostuijn 10

(see Figure 8). The Nord Stream has a capacity of 55 bcm per year,¹³⁹ which is approximately 30.56 percent of Gazprom's annual gas exports to Europe. The motive for the underwater pipeline is that enables the company to bypass the central and eastern states, considering that Russia has been facing difficulties in securing control of the energy infrastructure in Central and Eastern Europe. Another reason for Gazprom's investment in the Baltic pipeline is that the company would be able to expand the pipeline and the oil terminal at Primorsk, thereby eliminating the dependence of oil terminals in the Baltic States, such as the Ventspils port in Latvia and Butinge in Lithuania.

Work on the South Stream has not yet begun. The South Stream is a gas pipeline running from Russia under the Black Sea to the Balkans, and branches to Austria and Italy (see Figure 9). The motive for this route is that Gazprom would also be able to bypass Poland, Ukraine and other central European states, and it can expand the pipeline infrastructure without political interference from EU states. Once completed in 2015, Gazprom expects the project to provide a capacity of 63 bcm per year.¹⁴⁰ Other countries that have expressed their interest in and signed on to the project include Serbia, Hungary and Bulgaria. The Nord and South Stream provide Russia with alternative transit routes through the European and reduce the leverage that transit countries, especially those in central and eastern Europe, have in negotiating with Gazprom and other energy firms. Although some experts claim the routes will outstrip Russia's oil and gas capacity, Gazprom believes that the two streams support Russia's energy policy on reducing the

¹³⁹ Woehrel Steven. "*Russian energy policy toward neighboring countries.*" Congressional Research Service (CRS) Report for Congress. 2 September 2011, p.5

¹⁴⁰ Woehrel Steven 5

attractiveness of other routes that bypass it for oil and gas pipelines from Central Asia and Azerbaijan to Europe and Asia.¹⁴¹

To achieve the expansion goals, Gazprom plans to implement processes to retain its position as the leading EU gas supplier, enter new geographical market (such as the United States and Asia Pacific regions), diversify its product lines, expand its sales performance with end consumers and improve its economic efficiency.¹⁴² To facilitate these growth and expansion strategies, Gazprom has improved the economic and resource capacity of Gazpromexport, its subsidiary company in charge of natural gas exports.

A review of historical data shows that Gazpromexport/Gazprom has been the global exporter of natural gas to Europe. It supplied more than 145 billion cubic meters worth 25 billion dollars in 2005 and increased the supplies to 180 billion cubic meters in 2008.¹⁴³ In addition, it was one of the few gas suppliers that with investments in technical and organizational infrastructure. The company invested in gas pipelines, underground storage of gas and joint ventures with competing firms. For instance, Gazprom liaised with the OMV group to acquire a large gas market segment in Austria.¹⁴⁴ These investments and collaborations were part of Gazprom's aggressive expansion policy on the European gas market.

To facilitate its infrastructural expansion into the European market, Gazprom also increased its prices for Central Asia gas supplies. This price increase was a strategic measure to improve the company's market share and position in the European market. According to Bochkarev's article on the Gazprom's strategic engagement in the Central Asia region, the gas

¹⁴¹ Woehrel Steven 5

¹⁴² Medvedev Aleksandr, "Natural gas in Russia's foreign trade." *International Affairs*. 6 (2005), pp.32-37.

¹⁴³ Medvedev Aleksandr 32-37.

¹⁴⁴ Medvedev Aleksandr 32-37.

prices increase in Central Asia to the European consumer prices aimed to reduce domestic gas production and enable the company to delay hydrocarbon exploitation in the Siberian and the Arctic reserves. In so doing, Gazprom hoped to increase its long-term strategic position in the European gas market and overthrow other competitors by risking short-term profits for long-term strategic benefits.

Another method that Gazprom used to overthrow competitors was to exert state influence in the gas industry. For instance, the company used its monopoly power to receive government support in mandating the use of Central Asia gas in fulfilling its contractual obligations. Through the Russian Energy Strategy, the company was able to reduce exploitation of Siberian and Arctic reserves and make this exploitation expensive for competitors.¹⁴⁵ This enabled the company to prevent a price war with Central Asian suppliers that would have negatively affected Gazprom as the company was still recovering from the global financial crisis.

A core aspect of the European business strategy was to transfer to European pricing and acquire long-term contracts for gas supply in the EU. Firstly, the increase in Central Asian prices to EU consumer gas prices facilitated the transfer to European prices. For instance, Gazprom increased its gas prices to Uzbekistan, Kazakhstan and Turkmenistan from \$140-160 per Mcm of gas (thousand cubic meters) in 2008 to \$340 per Mcm in 2009.¹⁴⁶ The company even expanded its price increase to Azerbaijan to reduce domestic gas production. Consequently, Gazprom was able to replace intermediary firms to facilitate quicker gas transactions from Central Asia to Ukraine.

¹⁴⁵ Bochkarev Danila. “*European gas prices: Implications of Gazprom’s strategic engagement with Central Asia*”, Pipeline and Gas Journal 238.10 (2011).

¹⁴⁶ Bochkarev Danila

The contract replacement forced Ukraine to change its gas supplier from RusUkrEnergo to Gazprom. Ukraine's contract replacement and the acquisition and control of Belarus pipeline system to supply gas to Poland demonstrate Gazprom's long-term acquisition strategy for the EU gas market. The company used the European price-transfer method to acquire long-term sales and transit contracts between Ukraine and Belarus. The retention of the long-term contracts enabled the company to take over domestic gas infrastructure and charge high prices for gas supply to other countries. It also supported gas infrastructural investments such as pipeline systems, underground storage and joint ventures. For instance, Gazprom liaised with the OMV group to acquire a large gas market segment in Austria.¹⁴⁷ These investments and collaborations were part of Gazprom's aggressive expansion policy on the European gas market.

According to Kupchinsky's report in the Eurasia Daily Monitor, the state-owned corporation collaborated with the Australia's OM oil and gas group, the Vienna Stock Exchange and the Centrex Europe Energy and Gas AG (CEEGAG) to develop a gas hub for the European market. The gas hub, termed as the Central European Gas Hub (CEGH), is located in Austria. Gazprom and OMV own 30 percent of the shares each while the rest of the partners each own 20 percent.¹⁴⁸

However, the expansion plan has generated criticism from the public. Firstly, there are concerns about the establishment of the CEEGAG and the Centex group. Gazprom's website indicates that the CEEGAG was founded by a subsidiary of the company, but the Eurasia Daily Monitor reports that the group was registered in Switzerland and owned by private energy companies in Cyprus and Austria. Moreover, CEEGAG did not pay any dividends on profits,

¹⁴⁷ Medvedev Aleksandr 32-37

¹⁴⁸ Kupchinsky Roman. "The shadowy side of Gazprom's expanding Central European gas hub", *Eurasia Daily Monitor* 5.217 (2008), 4 November 2011, http://www.jamestown.org/single/?no_cache=1&tx_ttnews%5Btt_news%5D=34120

which is contrary to the legal requirements of private companies.¹⁴⁹ Consequently, Gazprom's difficulty in hiding the relationship with CEEGAG through Gazprombank indicates that the information on CEEGAG and Centrex is incomplete, which further heightens public concern on Gazprom's scandals.

To begin with, the Centrex Group website makes no formal mention of Gazprom, although it claims to own a subsidiary company in Russia operating in the extraction and marketing of hydrocarbon reserves. These claims are contrary to Gazprom's assertion that Gazprom Bank founded the Centrex Group. Secondly, the European Commission supports the claim that the supposed non-existent relationship between Gazprom and Centrex does not explain how Centrex has privileged access to gas sources in Russia and the EU gas market.¹⁵⁰ For instance, the managers of Centrex have repeatedly denied knowledge of Gazprom's management, although the company claimed to own Centrex group (Zug, Switzerland) is owned partly by the deputy chief executive officer of Gazprom.¹⁵¹ The same company (Zug) has also been accused repeatedly of having criminal connections in Russia and abroad.

The mystery behind Gazprom's strategic collaboration with industry partners elucidates Europe's concern on control share of the European gas hub. If Centrex is lined to Gazprom, it implies that the latter will control 50 percent of the strategic central European. The control share will expose the European gas hub to sabotage, especially the Nabucco pipeline that will pass through Baumgartner and serve as a conduit for money laundering by state officials into foreign

¹⁴⁹ Kupchinsky Roman

¹⁵⁰ Kupchinsky Roman

¹⁵¹ Kupchinsky Roman

accounts in Russia and Austria, as well as offshore accounts.¹⁵² These supply contract concerns have necessitated an antitrust probe by the EU.

The EU antitrust probe evaluates Gazprom's long-term gas supply contracts with European companies to identify any irregularities in pricing and supply.¹⁵³ This probe is necessary because it allows the European Commission access to gas capacity information that is restricted from regulators. The European Commission raided Gazprom's units including the OMV AG energy partner for CEEGAG and evaluated the destination clauses of Gazprom's supply contracts.¹⁵⁴

4.3. European Fears.

Gazprom supplies 25 percent of the total European energy needs and currently hopes to expand its supply capacity to the EU. There are fears the European gas market is heavily dependent on the Russian company, which exposes it to price, supply, efficiency and capacity constraints affecting the firm. Moreover, the reliance on Gazprom exposes EU countries to infrastructural and economic exploitation by the state-owned corporation.¹⁵⁵ Consequently, the European Union has established diversification strategies by identifying alternative reliable and efficient energy supplies, and opening up domestic markets and pipelines to the international

¹⁵² Kupchinsky Roman

¹⁵³ White, Aoife, and Anna Shiryayevskaya. "Gazprom gas supply contracts are focus of EU's antitrust probe." *Bloomberg Businessweek*. 28 September 2011, 4 November 2011, <http://www.businessweek.com/news/2011-09-28/gazprom-gas-supply-contracts-are-focus-of-eu-s-antitrust-probe.html>

¹⁵⁴ White, Aoife, and Anna Shiryayevskaya

¹⁵⁵ White, Aoife, and Anna Shiryayevskaya

market.¹⁵⁶ The European Union hopes the diversification of energy suppliers and trade will reduce the cartel trade between consumers and energy suppliers.¹⁵⁷

One way that the EU can diversify its energy supply is to invest in shale gas and renewable energy. Figure 7 provides global gas estimates for different regions. Shale gas explorations are currently being conducted in Poland, Czech Republic, Hungary, Austria, the United Kingdom and Ukraine.¹⁵⁸ According to Jozwiak, Poland has the largest shale gas reserve in Europe, estimated at 5.3 trillion cubic meters or 30.28 percent of the recoverable shale gas in the EU. It granted 68 concessions to companies from the United States and Canada to explore gas in the country. Results of seismic surveys show that Poland's gas supplies could topple Russia as the leading gas supplier because 56 percent of the extractions will increase gas reserves by 750 percent. Moreover, Poland promotes a competitive business environment by establishing environmental regulations to reduce the ecological impact of shale gas extraction on the environment.¹⁵⁹

Although there are concerns about the geology, depletion rate of gas wells and public acceptance of a cheaper form of gas, proponents believe that shale gas is an unconventional solution to Russian domination.¹⁶⁰ They propose that these Western European countries should improve investment conditions by providing tax breaks and maintain a vibrant service sector.

¹⁵⁶ White, Aoife, and Anna Shiryayevskaya

¹⁵⁷ White, Aoife, and Anna Shiryayevskaya

¹⁵⁸ Stevens Paul. "The 'Shale gas revolution': Hype and reality", Chatham House Report. 2010, p.6

¹⁵⁹ Jozwiak Rikard. "Poland's shale-gas dream could dramatically change continent's energy game" Radio Free Europe/Radio Liberty. 17 June 2011. 4 November 2011, http://www.rferl.org/content/poland_shale_gas_extraction_energy/24238051.html

¹⁶⁰ Stevens Paul. "The 'Shale gas revolution': Hype and reality", Chatham House Report. 2010, p.7

The countries should also implement measures to control the depletion of the gas wells estimated at eight to twelve years compared to the thirty to forty years for conventional gas wells.¹⁶¹

The EU has also taken measures to curb the cartel trade between suppliers and consumers such as initiating the European Commission's probe on Gazprom. The probe has elicited political reactions in Europe.¹⁶² Russia's president asserted that his government would examine the probing process much closely to ensure that the rights of the investors and gas suppliers were respected.¹⁶³ Other than the probe, the European Union has implemented a counteraction policy to prevent Gazprom's expansion to the EU. For instance, Germany and the Czech Republic, through the energy companies RWE and E.ON respectively, have weakened the link between gas and oil prices in the supply contracts with Gazprom. The weakening has helped the companies recover from the losses incurred using crude oil prices as the basis for supply prices. Another counteraction policy is the probe's demand that Gazprom provides similar pricing to all gas consumers in Europe, instead of the selective discounting used by the company.¹⁶⁴ The final counteraction policy has been to complicate the purchase of the European gas hub (CEGH) in Austria. Gazprom has objected to the purchase conditions arguing the requirements aim to discourage the company from expanding into the European gas market.

The EU's decision to diversify the energy industry by sourcing from external energy suppliers, opening up domestic markets and pipelines to the international market, and focusing on alternative energy sources (such as shale gas and renewable energy) will improve competition and investment in the energy industry.¹⁶⁵ The Union enacted legislation in 2009 to support the

¹⁶¹ Stevens Paul 11

¹⁶² White, Aoife, and Anna Shiryayevskaya

¹⁶³ White, Aoife, and Anna Shiryayevskaya

¹⁶⁴ White, Aoife, and Anna Shiryayevskaya

¹⁶⁵ White, Aoife, and Anna Shiryayevskaya

diversification strategies and reduce the current monopoly control in gas supply and distribution. This legislation made the EU responsible for monitoring the energy supply contracts between European consumers and producers to ensure that stakeholders respect the EU rules of competition.

In summary, the European gas market should not be entirely dependent on monopoly suppliers. It should implement balancing mechanisms to avoid price and supply exploitation by companies such as Gazprom by implementing policies for competitive supply, incentivize international companies to invest in gas supply and distribution through tax breaks and financial support, and invest in alternative energy industries. As regards the gas industry, the EU should monitor price determination by operators and deregulate gas supply through short-term contracts.

CHAPTER 5. COMPETING PIPELINES. CONSIDERATION OF SOUTH STREAM AND NABUCCO AS THE MAIN COMPETING PROJECTS OF RUSSIA AND EUROPE

The South Stream and the Nabucco projects are the two largest competitors for the European Union natural gas supply industry. Analysts claim that the South Stream, under supervision of Gazprom, is likely to emerge victorious.¹⁶⁶ They posit that although Nabucco has sufficient backing of the EU and the US, the project cannot counter the influence of the South Stream because it has no comprehensive supervisory executive. The South project has the sufficient financial backing from the Russia and ENI, an Italian firm. Nabucco, on the other hand, has been vulnerable to personnel and financing shortage, despite pledges for financial support from the European Commission, the European Investment Bank and the European Bank for Reconstruction and Development in 2009. Additionally, some of the transit and supplier nations in the Nabucco project are still undecided about the cost-benefit implications for each country. Nevertheless, the South Stream and Nabucco projects remain competitive tactical approaches to EU’s oil and natural gas supply problem.

The Nabucco project powerfully supported by the EU is going forward. The EU made a resolution on February 2010 to procure steel to build the 3,900 km pipeline with an expected annual capacity of 31 Bcm. The one-phased construction is expected to start in 2013 and have the first gas flow in 2017 (Nabucco Gas Pipeline). The resolution to create an alternative energy supply network is salient since there is room for more than one transfer conduit that is currently under the South Stream monopoly. The subject of energy supply diversification has turned out to be increasingly significant in the late 2000s going by the number of pipeline projects in the EU

¹⁶⁶ Cohen Ariel, “*Europe's strategic dependence on Russian energy*”, Heritage.org. 2007, 17 Sept. 2011 <http://www.heritage.org/Research/Reports/2007/11/Europes-Strategic-Dependence-on-Russian-Energy#_ftn10>

that were motivated by political need to reduce overreliance on Russian energy supply and protect the sovereignty of the member states.

By facilitating diversification of gas import resources, the EU has built up a firm overseas strategy through the Southern Corridor. This is believed to assist European economies connect to the richest natural gas regions in the world, the Caspian region, Middle East and Egypt (Nabucco Gas Pipeline). Since 2006, EU has exhaustively been encouraging the Nabucco project to reach at gas sources of Azerbaidjan, Kazakhstan, Turkmenistan, and perhaps Iran, Iraq and Egypt.¹⁶⁷ Certainly, the implementation of the Nabucco project is political, since it aspires to conquer the Russian gas import domination on the Central and Eastern European economies. The South Stream is Russia’s consolidation strategy to avert the threat posed by Nabucco. It weakens the monopoly that Ukraine and Belarus have on the European gas market and leverages Russia’s position in the EU by blocking Nabucco’s construction. Russia obstructs Nabucco’s progress by attracting the competitor’s gas suppliers and closing off the Azerbaijan and other terminal links through acquisitions.

Although the sponsorship for the South Stream and Nabucco pipeline projects aims to serve the interests of the stakeholders, both projects provide the EU with a solution to its rising energy demands. The projects use different routes to provide natural gas to the European market, and upon completion, these pipelines are expected to improve the reliability of natural gas supplies in the region. The projects promote competition in the energy industry by reducing

¹⁶⁷ Barysch Katinka, “Pipelines, politics and power: The future of EU-Russia energy relations”, *Centre for European Reform (CER)*, 2008, 20 September 2011, <http://www.foreignaffairs.com/articles/63661/philip-h-gordon/pipelines-politics-and-power-the-future-of-eu-russia-energy-rela>

dominance of gas producing and supply countries in Europe. The South Stream and Nabucco projects remain competitive tactical approaches to EU’s oil and natural gas supply problem.

5.1. Nabucco Pipeline Project.

The Nabucco conduit, also denoted as Turkey-Austria gas pipeline is an anticipated natural energy conduit from Erzurum in Turkey to Baumgarten an der March in Austria expanding natural gas provision and distribution routes for Europe. It reduces the European reliance on Russian power. The plan is financed by a few European Union nations and the United States and is perceived as an adversary to the Gazprom-Eni South Stream pipeline plan. Simultaneously, there are a number of reservations regarding the possibility of supplies.

The major contractor is predicted to be Iraq in collaboration with Azerbaijan, Turkmenistan and Egypt. Conversely, the Trans-Caspian Pipeline (TCP) plan, which Turkmenistan intends to employ to transport its gas to Azerbaijan, is at the preliminary deliberation phase. Bearing in mind the rising gas demand in Azerbaijan, Georgia and Turkey, Azerbaijan will not have sufficient gas in the 15 years to offer needed capacities to European consumers. Besides, Turkmenistan’s gas productivity is constricted to Russia up until 2028 and the likelihood of Iranian gas is far from pragmatic owing to its nuclear agenda. Accordingly, the Nabucco conduit could be unfilled.¹⁶⁸

¹⁶⁸ Friedman George, “*The geopolitics of Russian: Permanent struggle*”, (Austin, TX: Strategic Forecasting Inc, 2008), p.34

Arrangements for the Nabucco venture begun in 2002 and the intergovernmental accord involving Turkey, Romania, Bulgaria, Hungary and Austria was arrived at on 13, July 2009. Currently, the project is still not complete mainly because of the difficulties experienced in sourcing gas. The conglomerate of six corporations is in charge of building up the plan. If put up, the conduit is projected to be functional before 2017 and it will take, 31 Bcm - 1.1 trillion cubic feet of natural gas yearly. In the Trans-European pact - power agenda, the Nabucco conduit is perceived as of tactical significance. The intention of the plan is to bond the European Union better to the natural gas resources in the Caspian Ocean and the Middle East area. The development of the plan has been motivated by the objective of the EU to expand its present power provisions, and to reduce European reliance on Russian power, the main dealer of gas in Europe.

Furthermore, as stated by European Commission, Europe's gas utilization is projected to augment from 502 Bcm, in 2005, to 815 Bcm in 2030, which implies that supplies from Russia only would not be able to sustain the market. According to Nobuo Tanaka, the managerial administrator of the global Energy bureau, the Nabucco conduit would be more successful in rising Europe's power safety than the South Stream scheme as it amplifies the figure of gas contractors.¹⁶⁹ Presently, the idea is yet to be put in practice since states are still weighing the benefits of the venture.

Whereas the majorities of Western European nations as well as the United States, in their expedition to power safety, perceive the Nabucco plan as a hopeful footstep. Gazprom, the major exporter of Russian natural energy has wished for a pipeline that would be in opposition to

¹⁶⁹ Ebel, Roberts, “*The geopolitics of Russian energy: Looking back, looking forward*”, (Washington: CSIS, 2009), p.64

Nabucco, popularly termed as the South Stream. The Nabucco plan was initially instigated in 2002. However, because of hullabaloo and deficiency of unity, only Turkey was ready to enter into contract in 2009, and complete financial support was not to be legitimately billed at least until the beginning of 2011. One of the major tribulations is where the supply will originate.

Presently, Russia provides one third of all of E.U.’s gas requirements, which is mostly utilized for cooking. The frequent inconsistencies have been prompted by Kiev’s repudiation to reimburse augmented costs of gas and have made Europe to comprehend the explosive political environment of energy safety. In addition, with Europe’s escalating demand for natural energy, this matter of diversification is more critical. The Nabucco line would reduce Europe’s reliance on Russia for natural energy and permit Europe to expand its delivery, offering it more power safety in the end, particularly bearing in mind that the expenditure is expected to increase. If Nabucco was to descend the opinion, it could also cultivate a successful energy enterprise that could help enhance relationships between the E.U. and non-E.U. states such as Turkey and Azerbaijan. Furthermore, this has the possibility of changing the Central Asian nations into more sovereign, independent policy makers, as opposed to the current situation whereby they are accessories of Russia. In addition, Nabucco is a comparatively economical venture (\$6.2 billion with some scholars posting \$10.4 billion); evaluated against the amount of cash Europe is using to import gas from Russia together with the capital it will require to spend on road and rail network developments in upcoming years.

The Shah Deniz’s provision of natural energy that is, Azerbaijan would simply be possible for an initial commercial stage of shipment to Europe. Nevertheless, sustained provision could originate from different sources involving Central Asia that is, Turkmenistan. On the other hand, contracts in Central Asia have been challenged by Russia. For instance, South Stream and

Gazprom have entered into agreements for the supply stream of gas from Turkmenistan leading to questions on whether the Trans-Caspian line will not be constructed. Furthermore, although the Iranian alternative is pursued, majority of its major field in South Pars is devoted to local utility. Iran would additionally need to modernize its road and rail network, expand its fields prior to the materialization of the Nabucco project. Whereas there is more than one alternative for additional gas delivery to Nabucco, the threats are huge, as majority of these providing states are geopolitically divisive and a few are even unsteady to provide gas to Europe. Moreover, the expenses incurred in constructing extra pipelines to maintain Nabucco would be exorbitant. These potentialities do not seem as practical as continuing to rely on Russian provision. Besides, it is argued that although the political and infrastructural tribulations can be defeated, there are severe delivery difficulties that have to be tackled in these Middle Eastern countries.

Another problem facing Nabucco pipeline is the clandestine investment that is not supported by any country as compared to the South Stream pipeline. Subsequent to the rigid striking financial emergency, clandestine financiers will be less prepared to spend in an expensive conduit and countries will choose to gain energy security through easier (and relatively more secure) options such as Gazprom sponsored projects, especially if gas sources are not fully secured for continued supply through Nabucco.

Because of Nabucco’s debate that has been described by Russia’s adversaries as waning European reliance on their natural gas, Gazprom has come up with several diverse pipeline suggestions including their most assertively aggressive line that is seen as Nabucco’s immediate challenger, the South Stream. South Stream and Nabucco are premeditated to overlie. Whereas this could be factual, several scholars claim that Gazprom will not be competent enough to

provide all of the lines it has projected but is rather warming up for greater things in Europe’s gas market.

In case South Stream was to be put up, Russia would have power over a larger segment of gas transport to Europe therefore offering them even greater geopolitical control. Russia is consequently struggling a lot to ensure that it is not overtaken by events or circumvented by other actors in the gas market as far as natural gas supply is concerned. Additionally, Gazprom is trying to acquire direct admission to Central Asian gas and has entered into agreements with various states to achieve this, putting the proposed Nabucco gas program in danger.

5.2. The South Stream Pipeline Project.

The South Stream pipeline project is an undersea conduit that transports natural gas from Bulgaria to Austria and Italy. The pipeline bypasses the Black Sea to Bulgaria. From there, the pipeline proceeds in two directions: to Italy through Greece and the Adriatic Sea and to Austria, bypassing Serbia and Hungary. This motive for bypassing the Baltic countries in Central and Eastern Europe is to reduce Russia’s reliance on their oil terminals. The South Stream pipeline was endorsed by the Russian administration and has the support of Italy, Bulgaria, Greece and Serbia. Once completed, the South Stream will provide a capacity of 63 bcm per year.¹⁷⁰

The South Stream project, however, has not been smooth sailing owing to criticism from the EU and the Bush Administration in the US. The EU and the Bush Administration warn that

¹⁷⁰ Woehrel Steven, “Russian energy policy toward neighboring countries”, *Congressional Research Service (CRS) Report for Congress*. 2 September 2011, 19 November 2011, <http://www.fas.org/sgp/crs/row/RL34261.pdf>

the project does not reduce the current overreliance on Russia for natural gas supply. Poland and Ukraine oppose the project citing concerns that the South Stream will give Moscow leverage over regional energy issues. The Bush Administration opposed the South Stream project, proposing that the South and Baltic States should identify alternative gas supplies from Norway through Danish pipelines.¹⁷¹ Ironically, the Obama Administration has been less critical of the project. This could be because the US wants to improve its political relationship with Russia and not interfere with its energy issues. However, the administration advocates the revival of the Odesa-Brody extension project, which extends the pipeline between Odesa in Ukraine and Brody in Poland. The Odesa-Brody project not only reduces Russia’s advantage over Ukraine and Brody, but also the overreliance of Russia’s gas supplies to Georgia, Lithuania and Azerbaijan as well.

Despite this opposition, Russia is keen on completing the project. The government has not expressed any reservations about the project even after the effect of the global economic crisis on declining gas prices. Political and strategic reasons explain this commitment.¹⁷² Firstly, Russia’s stake in the South Stream ensures that it will have decisional control over the project. Its 51 percent stake in the pipeline through Gazprom ensures that the country has majority ownership of the project. The need for majority ownership arises from the difficulties Russia has faced in trying to acquire Ukraine’s pipelines. Again, Russia’s commitment is political because it plans to pay higher transit fees for the new pipelines as compared to what Nabucco will pay. Analysts estimate that the costs of transporting gas to the new pipelines will surpass the amount

¹⁷¹ Woehrel Steven

¹⁷² Leonhardt van Efferink, “*Nord Stream, South Stream and Nabucco Pipelines*”, Exploring Geopolitics, October 2010, 17 September 2011, http://www.exploringgeopolitics.org/Publication/Efferink_van_Leonhardt_Russian_Gas_NordSouthstream_Nabucco_Pipelines_ENI_EDF_EON_Ruhrgas_Wintershall_Gasunie_Azerbaijan_UzbekiTurkmeniKazakhstan.html

that Russia currently incurs through the Ukrainian and Belarus pipelines.¹⁷³ Nevertheless, Russia is still willing to push forward with the project, which it anticipates will provide the country with sufficient capacity to facilitate gas exports to Europe until 2030.

Russia’s commitment to the project is strategic because it attempts to prevent the construction of the Nabucco pipeline project. Nabucco threat to the South Stream is real on an economic and capacity level, given that the former will cost less than half and commence two years earlier than the latter.¹⁷⁴ Consequently, Russia has been implementing competitive strategies aimed at halting the construction of Nabucco. The core of these strategies is reduction of Nabucco’s supply capacity. Russia can reduce the supply risk from Nabucco by securing pipeline connections in Eastern Europe and closing off the Azerbaijan and other terminal links for Nabucco.

The first option for reducing the supply risk is very attractive to Russia. States such as Azerbaijan, Kazakhstan, Turkmenistan and Uzbekistan have expressed their interest in the Nabucco project. However, Nabucco has no previous knowledge of the market. Russia understands the EU market and knows that the contribution from these countries is only 20 percent of the total gas flow. Since this contribution is quite low, these countries have little bargaining leverage for Nabucco and can be easily persuaded to join the South Stream. To reduce Nabucco’s gas flows even further, Russia has persuaded Azerbaijan, Turkmenistan and Uzbekistan to agree with its sales contracts. It has also applied the same strategy to win over Turkey from the Nabucco project. Just one month after signing the intergovernmental accord on Nabucco, Turkey allowed Russia to use its waters for the South Stream pipeline. This was in

¹⁷³ Leonhardt van Efferink

¹⁷⁴ Leonhardt van Efferink

exchange for Russia’s infrastructural support for constructing a pipeline from the Black Sea to the Mediterranean and expanding the Blue Stream pipeline between the two countries.¹⁷⁵ As a result, these countries have abandoned the Nabucco project, dealing a huge blow for the competitor.

Russia has acquired stakes in different companies to off trading links to Nabucco. The first acquisition is the Baumgarten storage and distribution center. This center is the hub of Nabucco’s operations and its acquisition by Russia threatens Nabucco’s success. Russia has also acquired 50 percent stake in OMV in Austria and a large share in MOL energy firm (Hungary) to block Nabucco from proceeding further.¹⁷⁶ The South Stream project has an advantage over Nabucco because Russia still maintains strong political influence over Kazakhstan, Azerbaijan and Turkmenistan. This allows Moscow to control the gas flow from the regions. Moreover, Russia’s recent assertion that countries bordering the Caspian sea should not build pipelines on the sea bed or drill for gas without approval from the neighboring nations restricts Nabucco’s arrangement to using tankers to transport oil and gas shipments from the sea to Baku. Thirdly, Gazprom’s pricing strategy to pay suppliers the market prices for gas weakens the supplier’s bargaining power and increases their switching cost to the competitor.¹⁷⁷

¹⁷⁵ Woehrel Steven

¹⁷⁶ Woehrel Steven

¹⁷⁷ Leonhardt van Efferink

Conclusion

The analysis has shown that the South Stream and the Nabucco projects are the largest competitors for the European Union oil and natural gas supply industry. A comparison of the strengths and weaknesses of the two projects shows that the South Stream will emerge victorious as the EU gas supplier. Although Nabucco has sufficient backing of the EU and the US, the project does not have the financial, infrastructural and organizational capacity to counter the influence of the South Stream. This is despite pledges for financial support from the European Commission, the European Investment Bank and the European Bank for Reconstruction and Development as well as support from the US. Furthermore, some transit and supplier state members to the Nabucco project are still uncommitted and have been persuaded by Russia to join the South Stream project. On the other hand, Russia and ENI have the financial, infrastructural and organizational capacity to invest in the South Stream pipeline project.

Russia’s approach to energy policies shows that it will emerge victorious against Nabucco. It has undertaken an aggressive campaign to complicate the construction of Nabucco by acquiring stakes in transit and supplier countries and using the national support to invest in the Central Asian region. This has allowed the country to persuade Nabucco supporters to abandon the project, thereby postponing the completion of Nabucco. Moreover, its investments in Central Asia enable the country to exploit untapped areas in Siberia and the Far East, thereby improving its bargaining advantage over Nabucco. Nabucco’s declining performance has caused some European states to migrate to the South Stream project, with calls for Nabucco’s merger with the South Stream pipeline. A merger will not achieve Nabucco’s strategy of reducing

Russia’s dominance. Nevertheless, the South Stream and Nabucco projects remain competitive tactical approaches to EU’s oil and natural gas supply problem.

CONCLUSIONS

Russia enjoys the first position as the largest country in the world, however its economic capabilities have become very limited and there had been a decline in international position, after the cold war ended. The international competition, that takes place in Russia, is of great significance, especially in positioning Russia as a world power without using military force. Russia wants to be recognized as a powerful state and they want to be in an environment, where they do not require much help from their neighbors. The only way of survival for them is to employ defensive tactics and hence the need to clearly adopt defensive realism theory. This is because other states remain to be threats to Russia and they do not know which among them they can contact when they are in trouble. Russia has clearly adopted the approach supported by defensive realism theory to regain control as a superpower in Europe.

The need to apply defensive realism in the Russia's energy policy has been catalyzed by the emerging international competition for the Russia's energy resources. Russia, as a major supplier of gas in the European market, is considered to be quite influential in the energy sector (Jones, 2009). The Russian government strives to control the energy industry in Russia and the neighboring countries in the larger Europe. It is clear that Russia as the state has a strong will to gain more political weight through the energy sector. Taking into account, that natural gas is hardly replaceable, as it requires a long term investments in transportation infrastructure, its consumers have less alternatives, and that fact gives an advantage to supplier in any negotiation processes.

As it was mentioned, there is only one company which manages Russian natural gas export, it is Gazprom. But why Gazprom as the independent economic unit, which usually motivated by financial benefits, is deeply involved into political processes? The answer is obvious, as it was

disclosed in Chapter 2, Gazprom is the quasi-gas monopoly, where Government is the main shareholder, the shareholder who creates all necessary conditions to strengthen Gazprom's position in both local and overseas markets. It includes granting to Gazprom the status of sole gas exporter of natural gas, LNG and LPG, control under UGSS, and primary right to develop main gas fields in the country. With support of the Government, Gazprom has also tried to squeeze out foreign companies from the Russian domestic market. It succeeded in taking control from Shell and BP of the vast Sakhalin-2 project.¹⁷⁸ In 2009 Gazprom, in spite of expecting massive financial losses, cut off all supplies to Europe travelling through Ukrainian pipelines, in order to reach political goals of the state. Moreover, it was proven that actual connection between Gazprom and the government goes further than the official one, by the fact that current political elite in the face of President Dmitri Medvedev and Prime-Minister Vladimir Putin are highly associated with the company. Therefore, politicization of Gazprom's decision-making process towards local and overseas markets has enough grounds to be proven.

We can conclude that Russia itself acts according to the defensive realism theory that justifies the gaining enough power in order to reach certain level of security, while energy sector and Gazprom itself are highly politicized. That makes European desire to diversify its gas supply sources and decrease dependence on Russia more than justified. However, what are the perspectives for Europe to decrease its dependency on Russian natural gas export.

The most perspective suppliers considered by Europe are other countries in CIS region, including Azerbaijan, Turkmenistan and Kazakhstan – the countries which possess dramatic natural gas reserves. But what is the situation on these markets today? Talking about Kazakhstan, we can see that Russia is the main gas consumer here with more than 90 per cent of

¹⁷⁸ Yasmann Victor, "Putin's Choice: A profile of Dmitry Medvedev", *RFE/RL*, December 10, 2010, <http://www.globalsecurity.org/wmd/library/news/russia/2008/russia-080323-rferl01.htm>

share in total export. Taking into account strong economic and political relationships between Russia and Kazakhstan (newly created custom union, the market price paid by Gazprom for the Kazakh's natural gas, well-established transportation infrastructure), success of Europe in that direction is quite miserable. Turkmenistan, Gazprom has major share of this country's gas exports, based on Russian-Turkmen 25-year Cooperation Agreement (2003).¹⁷⁹ However, the Russia-Turkmenistan gas dispute in 2009 made Turkmenistan look for diversification of gas consumers. As the result in July 2009, Turkmenistan and Iran signed the agreement to increase gas imports, thereby Iran became the second largest Turkmen gas consumer. It is possible, that from 2011 onwards, the new player will appear on this market in the face of China, thanks to CAGP pipeline. In any case, Turkmenistan has satisfied its desire of gas consumers' diversification, what has filled the market with the demand for now. However, even if these countries would have a desire to sell their gas to Europe, the transportation issue arises. The unresolved legal status of the Caspian Sea is a stumbling block insofar as Turkmenistan, as well as Kazakhstan, feels obliged to take Russia's interests into account in formulating its own energy export policy. Russia insists, as a way of blocking the TCGP, that the agreement of all five littoral states is necessary for any trans-Caspian pipeline to be built.¹⁸⁰ The only country, which has a real chance to bring its natural gas to Europe, is Azerbaijan. In regard to Azerbaijan, Gazprom's position was quite precarious in the not far past. But already, starting from 2010 based on the agreement between Gazprom and Socar, the volume of gas planned to be exported is 1 Bcm, with a further increase of this figure up to 2 Bcm in 2011. Gazprom currently buys Azeri gas at market price and has a strong desire to increase its volume in a short period of time. However, Azerbaijan still insists that cooperation with Gazprom won't affect plans to deliver

¹⁷⁹ "Gas purchases", *Gazprom official site*, November 22, 2010, <http://www.gazprom.com/production/central-asia/>

¹⁸⁰ Cutler, Robert, "Kazakhstan looks at the Trans-Caspian for Tengiz gas to Europe", Central Asia-Caucasus Institute, (01/28/2009), December 8, 2010, <http://www.cacianalyst.org/?q=node/5023>

Azerbaijani gas to the European consumers. In any case, as it was mentioned many times before, Gazprom is first of all motivated by political agenda of its host state - preventing Europe to enter other potential markets in this case, neither than financial benefits. For this reason money loss is acceptable for Gazprom if it causes some “political victory”. Thereby, Russia has price dumping advantage over Azerbaijan on European market, when dumping for Azerbaijan is money loss on gas which could be sold to Russia for the market price.

Considering European market itself, we can see that natural gas is currently the second most important fuel in the European Union. Europe’s natural gas market shows heavy dependence on exporters outside the European Union (EU). Statistics shows, that Europe obtained 47 per cent of its natural gas supplies from external sources in 2009.¹⁸¹ At present, the leading source of natural gas imports to Europe is Gazprom, which exported more than 33 per cent of all gas consumed in Europe in 2009. Russia’s expansion strategy aims to increase dependence on natural gas to make it the leading exporter of natural gas and dominant political power in the EU. As adequacy respond, Europe is actively looking for the alternative which includes renewable energy and own shale gas fields development and ambitious Nabucco project realization. In the meanwhile, renewable energy has a serious disadvantage such as high cost, which makes it low competitive to natural gas. The main difficulty related to shale gas is a fast depletion of the gas wells estimated at eight to twelve years compared to the thirty to forty years for conventional gas wells.¹⁸² Nabucco pipeline, as the main competitor of Russian South Stream, has faced the lack of contractors. The major contractor is predicted to be Iraq in collaboration with Azerbaijan, Turkmenistan and Egypt. Conversely, the Trans-Caspian Pipeline

¹⁸¹ Keenan Rita. “Statistical aspects of the energy economy in 2009” Eurostat: Statistics in focus (2010):1-12. 4 November 2011, http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-10-043/EN/KS-SF-10-043-EN.PDF

¹⁸² Stevens Paul. “The ‘Shale gas revolution’: Hype and reality”, Chatham House Report. 2010, p.11

(TCP) plan, which Turkmenistan intends to employ to transport its gas to Azerbaijan, is at the preliminary deliberation phase. Bearing in mind the rising gas demand in Azerbaijan, Georgia and Turkey, Azerbaijan, besides the reasons described above, will not have sufficient gas in the 15 years to offer needed capacities to European consumers. When Turkmenistan's gas productivity is constricted to Russia up until 2028 and the likelihood of Iranian gas is far from pragmatic, owing to its nuclear agenda. Accordingly, the Nabucco conduit could be unfilled.¹⁸³ Gazprom, in its turn, doesn't have any problems with "filling the tube" for its core projects as Nord Stream (former names: North Transgas and North European Gas Pipeline) and the South Stream pipeline.

As the main conclusion of this work, we can say that today Europe doesn't have self-sufficient alternative to Russian's natural gas. Unless it is ready to "pay more" for renewable energy or depletion of shale gas wells or natural gas which was already bought for the market price. However, in long term perspective, by introducing balancing mechanisms to avoid price and supply exploitation by companies such as Gazprom by implementing policies for competitive supply, incentivizing international companies to invest in gas supply and distribution through tax breaks and financial support, and investing in alternative energy industries, Europe has real chance to lower its dependency on external suppliers or at least diversify them.

When this paper was almost finished two remarkable events took place. First, in November 2011, after 13 years of planning and two years of construction, the Nord Stream pipeline has started to deliver its first supplies of Russian.¹⁸⁴ Second, in December 2011, Turkey

¹⁸³ Friedman George, *"The geopolitics of Russian: Permanent struggle"*, (Austin, TX: Strategic Forecasting Inc, 2008), p.34

¹⁸⁴ *"Nord Stream Launched: Russian Gas flows to Europe"*, Russia Today, 8 November 2011, 30 December 2011, <http://rt.com/business/news/nord-stream-strat-november8-769/>

has approved the construction of the South Stream gas pipeline which is intended to carry Russian natural gas under the Black Sea to Europe.¹⁸⁵

¹⁸⁵ “Turkey, Russia reach agreement on South Stream pipeline”, *Wireupdate*, 28 December 2011, 30 December 2011, <http://wireupdate.com/turkey-russia-reach-agreement-on-south-stream-pipeline.html>

ABSTRACT

In the period of globalization, energy security has substantial implications for the mutual security of supply and demand. It is dependent on several factors as security of supply, resilience and interdependence. As the result, multi-national corporations controlling wide energy resources are becoming more and more involved in the international politics - the situation when supplier is not just one of the contractual parities but “tool” for political pressure of its host state. Russian Gazprom, which operates on European natural gas market, is the vivid example of such situation.

The research project is based on a deep review of relevant literature sources using the data analyzing, comparative analysis and the case study methods. The main research questions are the following: are European “fears” justified and what are the perspectives for Europe to decrease its dependency on Russian natural gas export? The main conclusions to be drawn from this study are that Europe has full grounds to be against growing dependence on Gazprom, taking into account Gazprom’s involvement into politics, its aggressive actions directed toward prevention of Europe accessing other markets, promotion of the projects leading to growth of Europe’s dependency on Russian natural gas; and that currently there is no self-sufficient alternative to Russian Gas for Europe, unless certain measures will be taken as introducing balancing mechanisms to avoid price and supply exploitation by companies such as Gazprom by implementing policies for competitive supply, incentivizing international companies to invest in gas supply and distribution through tax breaks and financial support, and investing in alternative energy industries.

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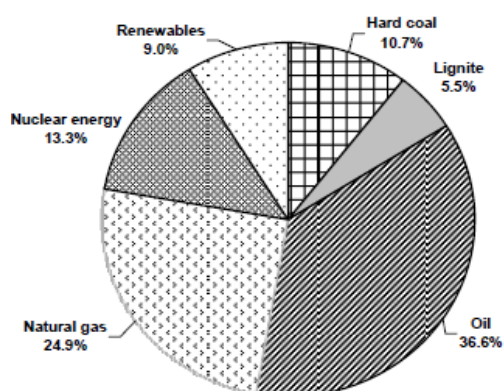
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FIGURES AND TABLES

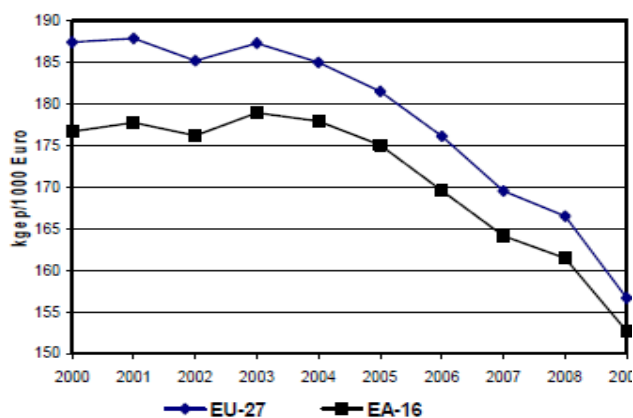
Table 1. OAO Gazprom Share Capital Structure as of December 31, 2010, %

	Stake
The stake controlled by the Russian Federation	50.002
<ul style="list-style-type: none"> • The Russian Federation represented by the Federal Agency for State Property Management 	38.373
<ul style="list-style-type: none"> • OAO Rosneftegaz 	10.740
<ul style="list-style-type: none"> • OAO Rosgazifikatsiya 	0.889
ADR holders	22.150
Other registered persons and entities	27.848

Figure 2. The gross inland energy consumption trends in EU-27

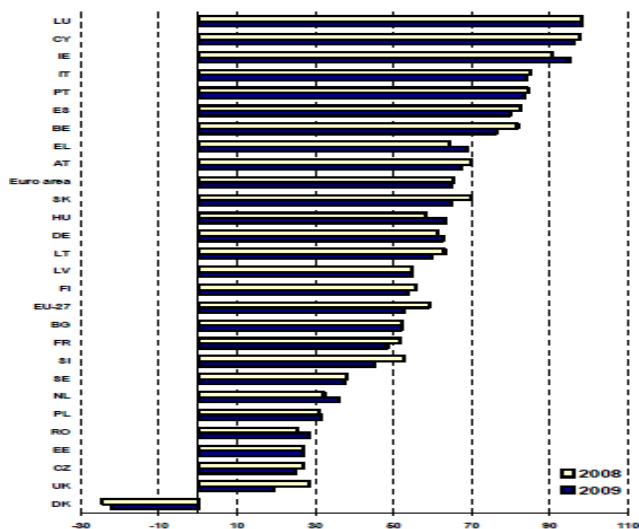
Source: Eurostat

Figure 3. Trends in energy demand from 2000 to 2009



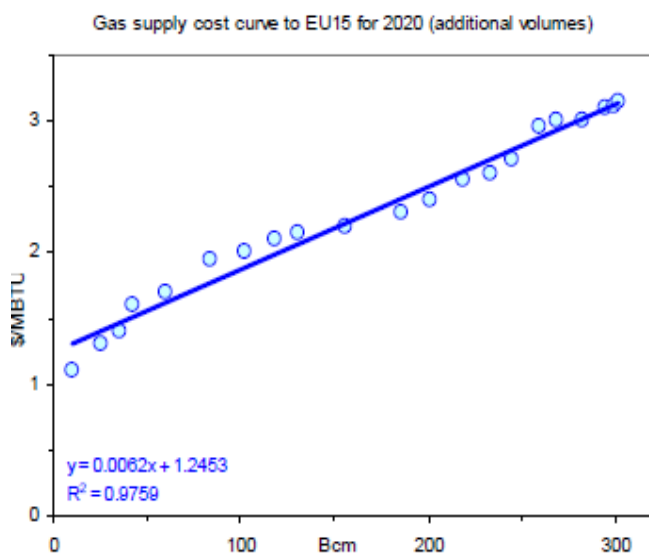
Source: Eurostat

Figure 4. Energy dependency comparisons in the EU between 2008 and 2009



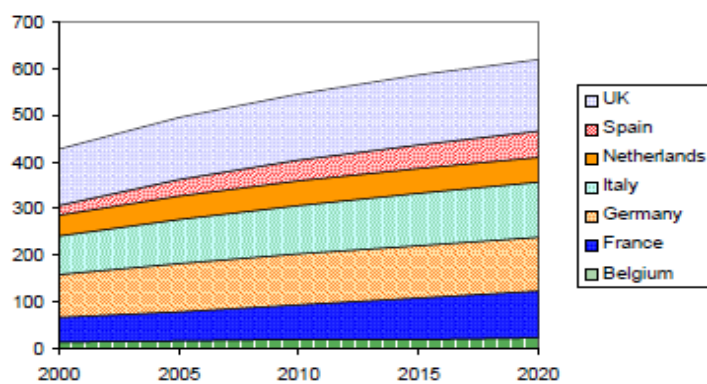
Source: Eurostat

Figure 5. A graph of estimated cost curve for gas supply in the EU by 2020



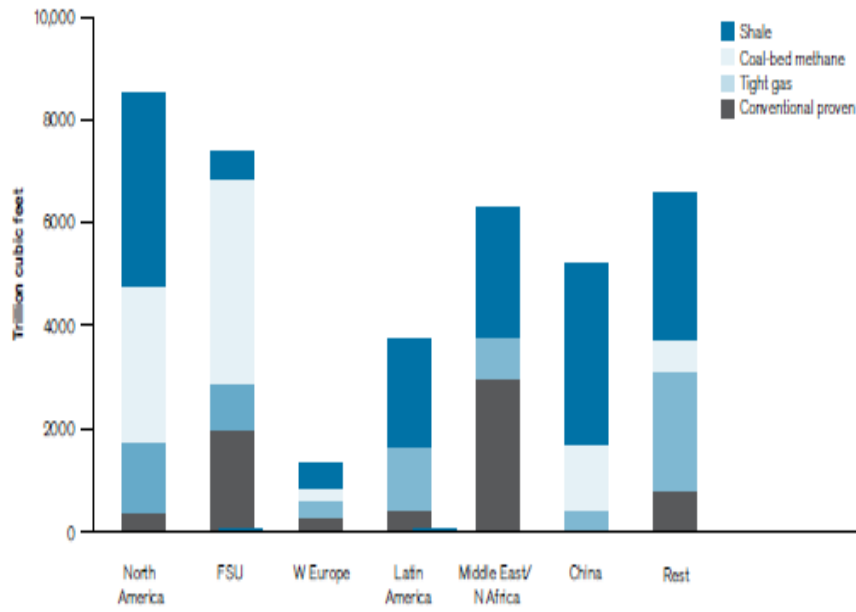
Source: Tjalling C. Koopmans Research Institute

Figure 6. The demand for natural gas in the EU in Bcm



Source: Tjalling C. Koopmans Research Institute

Figure 7. Global gas resource estimates for 2007/08



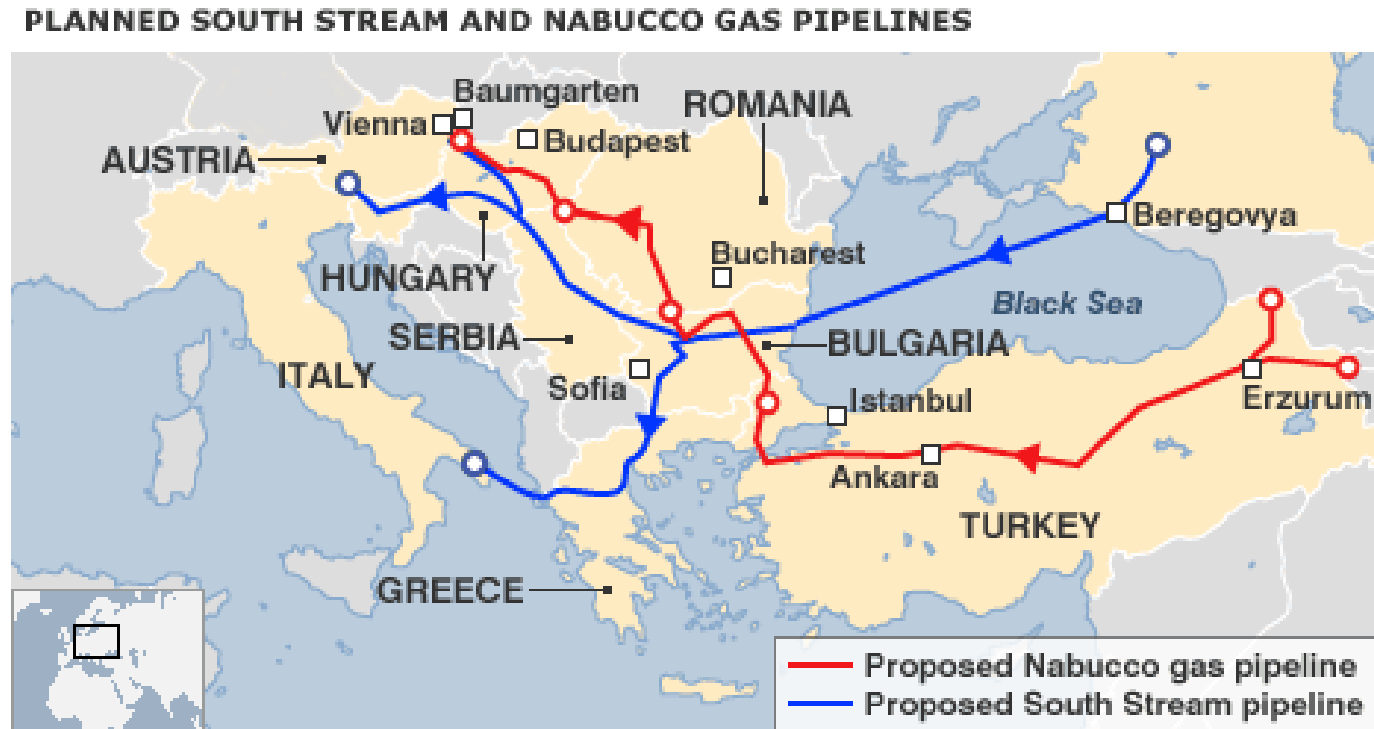
Source: Chatham House Report

Figure 8. Nord Stream Pipeline



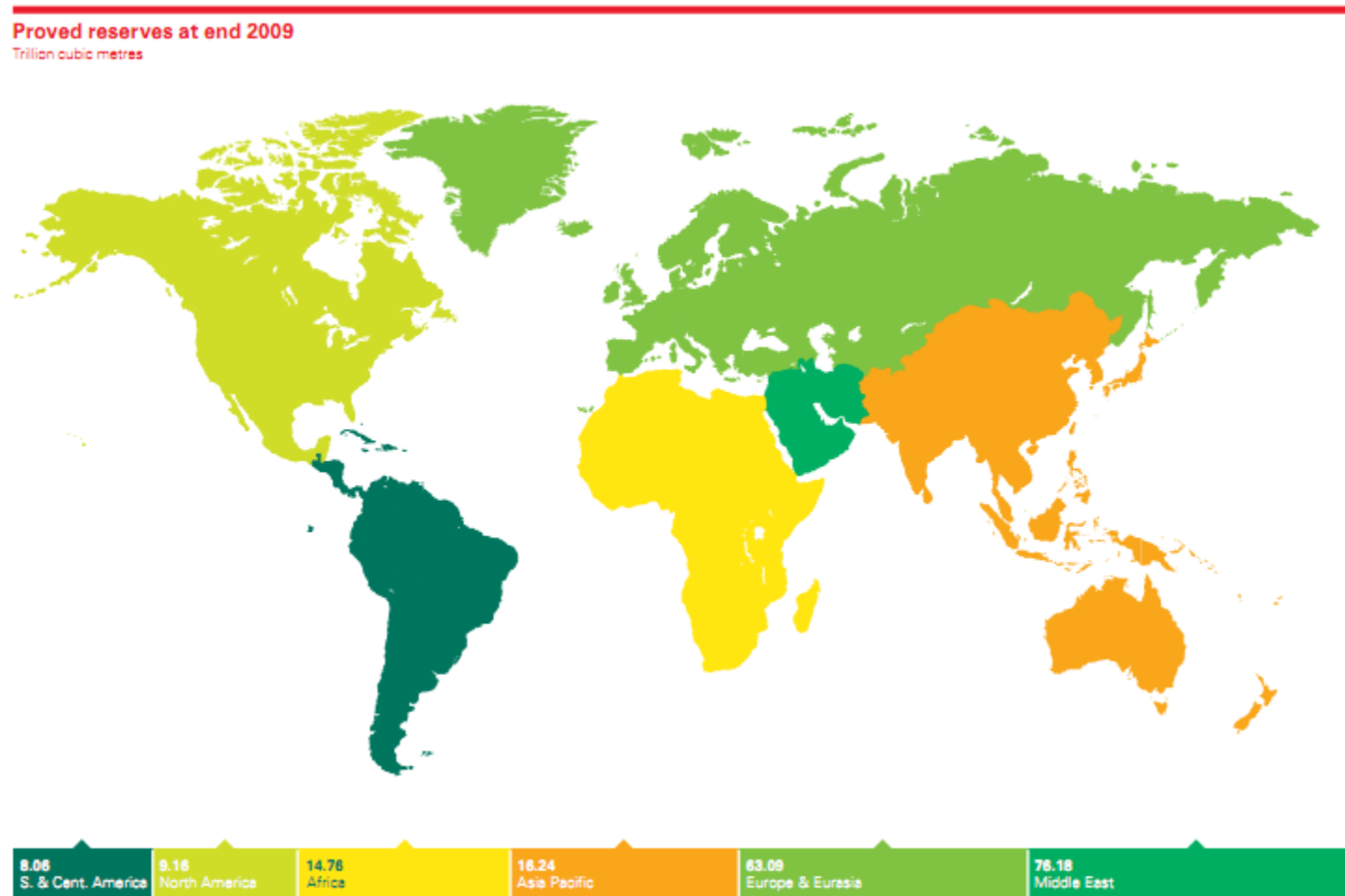
Source: eegas.com

Figure 9. Planed South Stream and Nabucco Gas Pipelines



Source: *bbc.co.uk*

Figure 10. Proved Reserves at end 2009



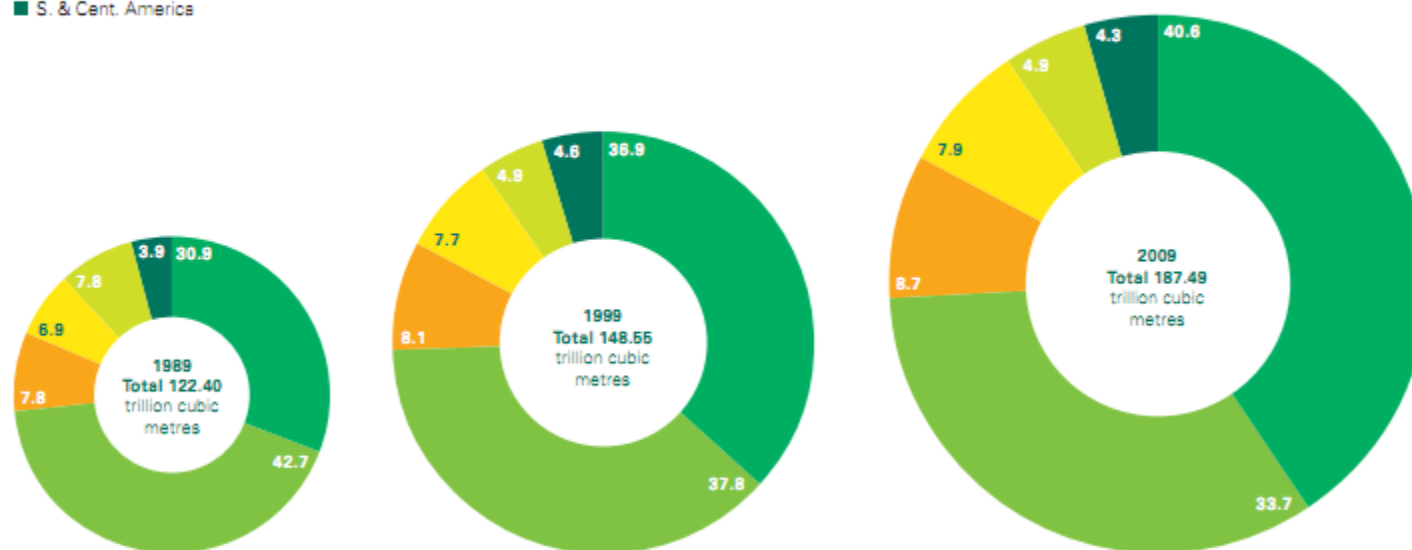
Source: BP

Figure 11. Distribution of proved reserves in 1989, 1999 and 2009, %

Distribution of proved reserves in 1989, 1999 and 2009

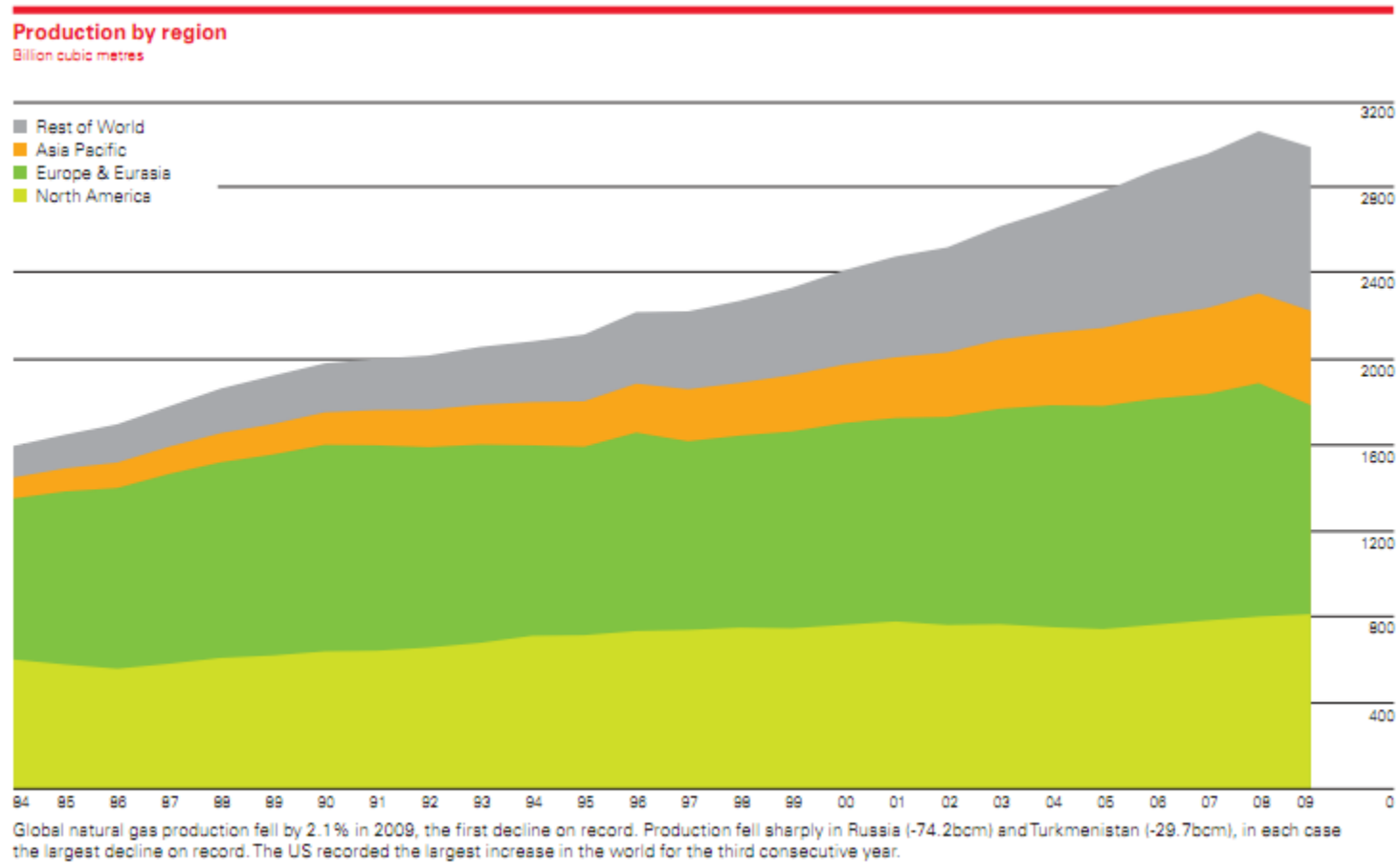
Percentage

- Middle East
- Europe & Eurasia
- Asia Pacific
- Africa
- North America
- S. & Cent. America



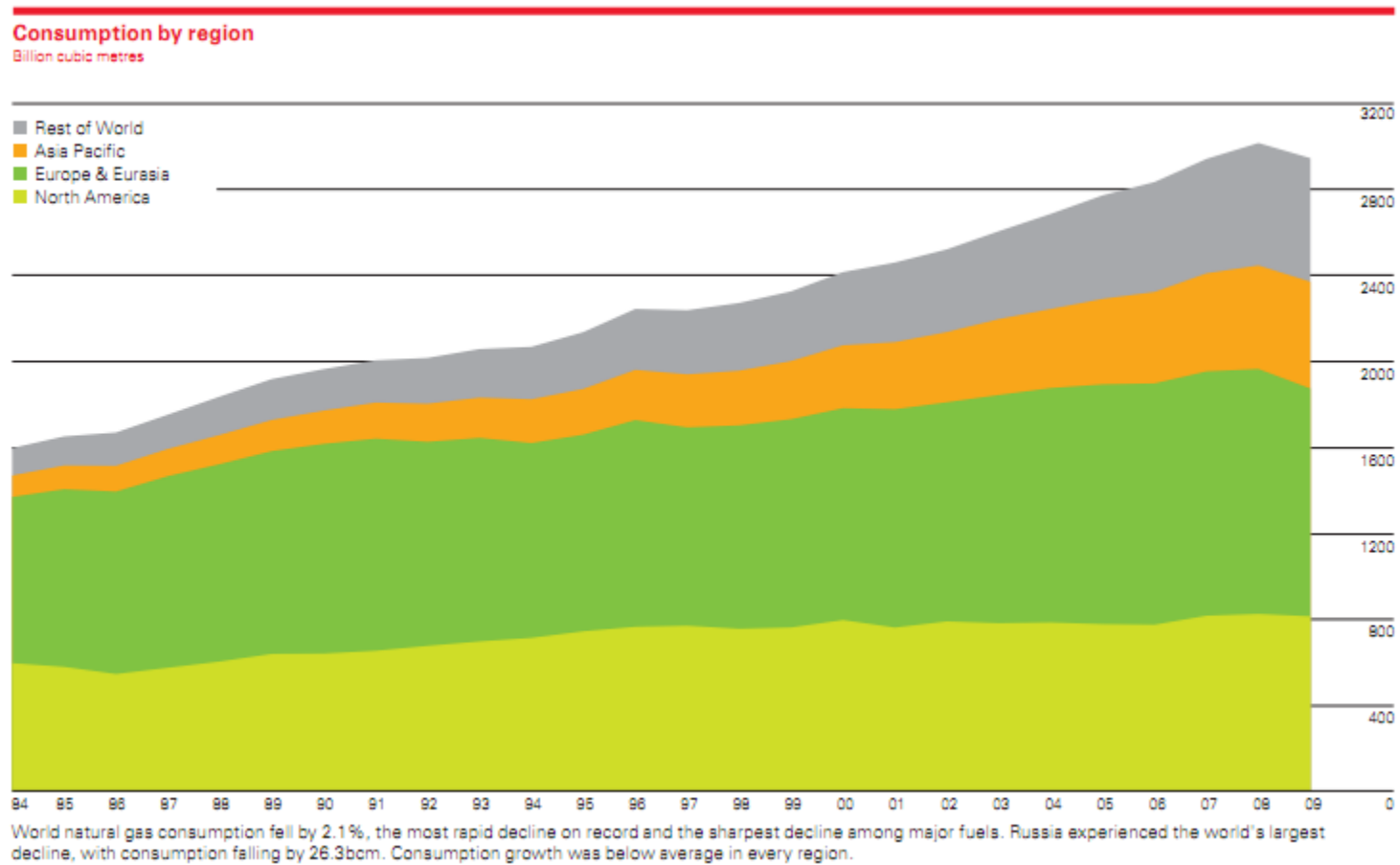
Source: BP

Figure 12. Production by Region, Bcm



Source: BP

Figure 13. Consumption by Region, Bcm



Source: BP